



AES 2022 ANNUAL MEETING PROGRAM BOOK

Music City Center
Nashville, Tennessee





VISIT UCB
Booth
#600

When you care,
your work is never done.

At UCB, we are proud of our legacy of helping people living with severe neurological diseases. This legacy includes a portfolio of 3 treatment options featured in our booth.

We're honored to continue partnering with you on the next discovery and the next innovation—now and into the future. We do it for the people who matter, like LaKeisha.

We have a lot to catch up on with you.



Inspired by patients.
Driven by science.

INTERACTIVE TAKEDA BRAIN

AUGMENTED
REALITY

COME EXPERIENCE

TAKEDA NEUROSCIENCE IN

AUGMENTED REALITY

to learn more about rare childhood epilepsies!

BOOTH #1139

Takeda does not have any approved treatments for rare epilepsies.
Intended for Healthcare Professionals Only.

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VV-MEDMAT-74648. 09/2022.





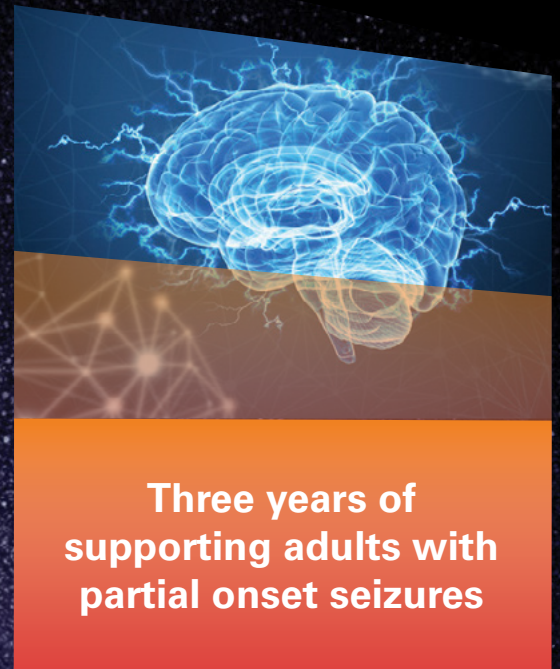
Because there's still work to be done

Special Scientific Exhibit and Posters

**Monday, December 5, 2022
2:00 – 5:00 PM**

**Room 208 AB, Level 2
Music City Center
201 Rep. John Lewis Way South
Nashville, TN 37203**

REFRESHMENTS WILL BE PROVIDED



**Three years of
supporting adults with
partial onset seizures**

Disclaimer: Opinions presented during this scientific exhibit are those of the sponsoring company and are not a reflection of American Epilepsy Society opinions, nor are they supported, sponsored, or endorsed by the American Epilepsy Society.

To learn more, visit <https://www.sk Lifescienceinc.com>

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ALERT

What other symptoms of **Rett syndrome** are asking for your attention?

Rett syndrome is a rare neurodevelopmental disorder that primarily affects girls¹

With no FDA-approved treatment for Rett syndrome (RTT), treatment is symptomatic and supportive.^{1,2} But there are additional challenges of daily life with RTT that can take a physical and emotional toll on caregivers^{3,4}—including symptoms like syndrome-related behaviors, breathing issues, mood disturbances, and nighttime behaviors.^{5,6}

Considering these and other manifestations of Rett syndrome may greatly impact care—giving voice to the unique challenges and unspoken needs of this disorder.



Together with caregivers, you can help identify more opportunities for collaborative and comprehensive care for individuals with Rett syndrome.

Uncover the full impact of Rett syndrome.



Visit us at
Booth #222

References: 1. National Institute of Neurological Disorders and Stroke. Rett syndrome fact sheet. Accessed August 2, 2022. <https://www.ninds.nih.gov/rett-syndrome-fact-sheet> 2. Gold WA, Krishnaraj R, Ellaway C, et al. Rett syndrome: a genetic update and clinical review focusing on comorbidities. *ACS Chem Neurosci*. 2018;9(2):167-176. 3. Mori Y, Downs J, Wong K, et al. Longitudinal effects of caregiving on parental well-being: the example of Rett syndrome, a severe neurological disorder. *Eur Child Adolesc Psychiatry*. 2019;28(4):505-520. 4. Palacios-Ceña D, Famoso-Pérez P, Salom-Moreno J, et al. "Living an obstacle course": a qualitative study examining the experiences of caregivers of children with Rett syndrome. *Int J Environ Res Public Health*. 2019;16(41):1-13. 5. Fu C, Armstrong D, Marsh E, et al. Consensus guidelines on managing Rett syndrome across the lifespan. *BMJ Paediatr Open*. 2020;4(1):e000717. doi:10.1136/bmjpo-2020-000717 6. Killian JT, Lane JB, Lee H-S, et al. Caretaker quality of life in Rett syndrome: disorder features and psychological predictors. *Pediatr Neurol*. 2016;58:67-74.

The Epilepsy Leadership Council

The Epilepsy Leadership Council (ELC) is a coalition of organizations and advocates representing people with epilepsy and their families. The ELC monitors advances in the epilepsy field, shares and disseminates information, and creates a united voice for advancing research, care, and education.

The Epilepsy Leadership Council is supported in part by a grant from Eisai Inc.



A WARM WELCOME TO MUSIC CITY!

On behalf of the AES Board of Directors, welcome to the 76th Annual Meeting of the American Epilepsy Society.

The pandemic isolation underscored how valuable and meaningful it is for our field to come together every year—not only for top-notch education and science, but also to catch random moments with long-time friends in the hallways, to enjoy a productive face-to-face conversation with a mentor or mentee, and to feel the pulse of progress happening all around us—making headway that ultimately will improve outcomes for patients.

As we gather in Nashville, the unique composition of our AES membership strikes a chord when we consider all of the roles that work in harmony to provide care for today's patients and hope for tomorrow's. Whatever your career stage and whether you are a clinician, clinical researcher, neuroscientist, neurosurgeon, industry specialist, patient advocate, or in another role, we are all one field. **This is where you belong.**

I extend a special tip of the hat to the hard-working mid-career professionals who are doing so much to advance clinical practice and science in their day-to-day work as they approach the peak of their careers, and also to the many talented and enthusiastic early career professionals who represent the future of our specialty. I encourage everyone to reach out to each other and engage with attendees from these groups, and also with the growing number of advance practice and allied health attendees who are doing so much to expand the level of care we can provide.

Inclusivity, diversity, and equity is a core value in our interprofessional community. Our Annual Meeting Committee volunteers—under the inspired leadership of chair Ignacio Valencia, MD, FAES—have worked hard to plan Annual Meeting content and activities that incorporate faculty, topics, and science that give voice to issues of underserved communities and feature members and others from historically under-represented groups in epilepsy medicine.

The record number of CME / CE credits available this year (between the in-person meeting and the AES 2022 Digital Select content, to which most registrants will have access for about three months following the meeting) is an exciting accomplishment for AES. Our education programs get stronger and stronger each year, and nowhere is this more evident than the quality and quantity of education available at the Annual Meeting. One result of the pandemic is our improved ability to create enduring content—meaning top-quality session recordings—that is available on demand online.

At the Presidential Symposium on Saturday morning, I will do my part to add to the new ideas you take home with you. We will explore John Hughlings-Jackson's historical contributions on different aspects of epilepsy (which were based on his observation of clinical seizures) and reevaluate his descriptions and interpretations of clinical seizures from a modern perspective. The overall goal of the Presidential Symposium is to emphasize the importance of clinical evaluation and interpretation of signs of symptoms of seizures, illustrated by Hughlings-Jackson's clinically-based theories of the pathophysiology of epilepsy before the advent of modern testing with EEG or neuroimaging. I also look forward to reviewing some critical points in our Society's role in clinical research in my talk during the Susan Spencer Symposium on Sunday.

So put on your most comfortable shoes (or boots!), check out everything AES that's happening in Music City Center and other AES venues, and settle in for the education, inspiration, ideas, friendships, and collaborations that will result from this meeting for so many.

Welcome, thank you for joining us, and enjoy AES 2022.

R. Edward Hogan, MD, FAAN, FAES

President

American Epilepsy Society



R. EDWARD HOGAN, MD, FAAN, FAES
President

Board of Directors

2022 Board of Directors



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Table of Contents

Welcome

From the AES President	1
From the Chairs	4

General Information

Mobile App	6
Business Centers	6
First Aid	6
Lost and Found	6
Parents' Room	6
Poster Concierge	6
Quiet Room	6
Informal Gathering Areas	6
WiFi Access	7
Photography Release	7
Meeting Policies	7
Safety and Security Information	7

2022 AES Awardees	8
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Maps

Hotel Event Map	9
Music City Center	10

About The Education Program

Global Learning Objectives	16
Mission Statement	16
Accreditation	16
Credit Designation	16
Continuing Education for Nurses and Pharmacists	16
Disclosure Policy	17
Disclaimer	17
Session Types	17

Program

Meeting at-a-Glance	20
Accredited Continuing Education	22
Special Interest Groups Sessions	29
Special Poster Sessions	33
Platform Sessions	38
Poster Schedules	44
Schedule at-a-Glance	46
Friday Program	55
Saturday Program	67
Sunday Program	78
Monday Program	92
Tuesday Program	107
Other Programming	114

Exhibitors

Exhibitor Listings	122
Exhibitors by Category	139

WELCOME TO AES 2022!

Thank you for taking part in the 76th Annual Meeting of the American Epilepsy Society. The Annual Meeting Committee volunteers who worked hard to put together five days of top-notch epilepsy education and science join us in extending a warm welcome to Nashville and AES 2022.

We are excited to be gathering here to learn, network, and enjoy the energy for which AES Annual Meetings are known. We hope you enjoy the nearly 180 hours of educational programming and the more than 1,300 posters here at AES 2022.

Attendees may claim credit for participation at the live event (with 39.5 CME credits available during the live meeting) **and** for participation via AES 2022 Digital Select (73 CME credits available for on-demand content). Note that most registrants will have access to select recorded sessions via Digital Select for three months after AES 2022, which expands your opportunity to earn those credits and continue to explore content after the in-person meeting. Digital Select content will be available in the AES 2022 mobile app beginning Tuesday, December 13.

2022 Program Highlights

Symposia and the Annual Course: Our fifteen symposia offer new and exciting insights into key topics in epilepsy care and research.

Special Sessions: Nine special lectures help to round out an already robust program. In addition to the celebrated Hoyer and Lombroso lectures, special lectures will include an ILAE/IBE joint session, a spotlight on the impact of Dobbs v. Jackson on reproductive health in epilepsy, and a joint session with the NAEC on coding and reimbursement policies.

Investigators Workshops (IWs) and Special Interest Groups (SIGs): Explore cutting-edge research from basic through clinical fields in our always-popular Investigators Workshops—of which we have twenty this year! Connect with colleagues who share your interests in 42 Special Interest Groups on varied topics for professionals in epilepsy.

Poster Sessions: Delve into the very latest research in eight poster sessions Friday through Monday. Review the program for author present times.

Professional Development: Enjoy a variety of career skills workshops on interdisciplinary team building, surviving your first year as faculty/attending, and how to apply for early career grants. Our popular career pathways panels are back with three concurrent sessions: clinical care, interprofessional careers, and research.

Skills Workshops in Basic and Clinical Science: Advance your clinical and practical skills with hands-on workshops. Topics include genetic testing, EEG, neurostimulation, and more.

We hope that you leave Nashville with new clinical knowledge you can use right away, new ideas based on research findings presented at the meeting, and new connections that will help you improve outcomes for people with epilepsy.

Thank you for joining us, enjoy the meeting!



Ignacio Valencia, MD, FAES
Chair, Annual Meeting Committee



Barbara C. Jobst, MD, PhD, FAAN, FAES
Chair, Council on Education

About AES

The American Epilepsy Society is a community of physicians, scientists, advanced practice providers, nurses, psychiatrists, psychologists, engineers, pharmacists, advocates, and other professionals engaged in the understanding, diagnosis, study, prevention, treatment, and cure of epilepsy.

We are dedicated to advancing knowledge and supporting evidence-based clinical practice to improve outcomes for persons with epilepsy and their families.

We value:

- Better outcomes for persons with epilepsy
- Innovation
- Inclusivity, diversity, and equity
- Collaboration
- Fairness, transparency, integrity, and excellence



aesnet.org

Executive Office
135 S. LaSalle St.
Suite 2850
Chicago, IL 60603
312-883-3800

With the AES Annual Meeting App, you can do it all:

- Browse sessions and events
- Build your personal schedule
- Access abstracts
- Explore the exhibit hall
- Network with other attendees
- Claim credit for your participation in the meeting
- Access on-demand Digital Select sessions (launching Tuesday, December 13)



Download the AES
Annual Meeting App
aesnet.org/mobile-app



About the Meeting

Music City Center

201 Rep. John Lewis Way South | Nashville, TN | 37203

Mobile App

Download the AES 2022 mobile app today! The app will allow you to save sessions and activities to build your schedule; find your way around the meeting with interactive maps; search for activities, exhibitors, speakers, posters, abstracts, and more; and connect with other attendees using PeerFinder (opt-in required). The app is the home of AES 2022 Digital Select, where you will access on-demand content after the meeting.

Search for "American Epilepsy Society" in the Apple App store or in the Google Play store to get started.



AES 2022 Digital Select

AES 2022 Digital Select is the home of eposters and the on-demand content recorded at the in-person meeting. Digital Select content will be available in the meeting app for 90 days beginning Tuesday, December 13, 2022.

Business Centers

Business Centers are conveniently located within Music City Center and the Omni Nashville Hotel. A variety of services offered include shipping, mailing, faxing, and photocopying. Please contact each business center directly for details.

Music City Center

The UPS Store – Business Center

Location: Level 2 near the Sixth Avenue entrance and Nashville Songwriters Hall of Fame
201 Rep. John Lewis Way South
Nashville, TN 37203

Phone: (615) 401-1495

Email: store6425@theupsstore.com

Omni Nashville Hotel

The UPS Store – Business Center

Location: 3rd Floor
250 Rep. John Lewis Way South
Nashville, TN 37203

Phone: (615) 761-3640

Email: store6468@theupsstore.com

Badges

Badges must be worn and visible to access all meeting and session areas. Music City Center security may restrict access to anyone that does not comply.

Coat and Luggage Check

Music City Center, Room 301, Level 3

Please refer to the available hours listed on signage. A nominal fee per item will apply. Laptops, cameras, and other electronics will not be accepted.

First Aid

Music City Center, Outside Exhibit Hall B, Level 3

First aid services are available by licensed medical professionals during session hours. Please note that in accordance with regulations, the first aid administrator is not permitted to dispense medication.

Lost and Found

Music City Center, Hall A1, Level 3

AES is not responsible for lost or missing items. Please visit the registration desk to look for lost items or to turn in items found. Please note that meeting and session rooms are cleaned between sessions and any items left behind will be discarded. Unclaimed items will be turned into Music City Center security at the conclusion of the meeting.

Parents' Room

Music City Center

Nursing parents are invited to use two nursing lounges provided by the Music City Center. One is located on Level 1 around the corner from Room 101. The other is on Level 3 near Exhibit Hall D. These private areas are equipped with electrical outlets, a changing table, sink, lounge chair, a side table and a refrigerator. Rooms can be locked from the inside for privacy.

Poster Concierge

Music City Center, Hall A1, Level 3

Music City Center, Exhibit Hall B, Level 3 (near poster number 001)

The poster concierge is available to assist presenters with their poster assignment information, including poster numbers and presentation times and dates. Please note: Staff will be available in the registration area during times the poster hall is closed.

Quiet Room

Music City Center, Room 210, Level 2

This room is intended to provide a comfortable, quiet, and calm space where attendees can spend time away from noise, lights, and other stimuli. The quiet room is not available for conversations or meetings.

Informal Gathering Areas

Seating areas are available throughout Music City Center. These are perfect for small group conversations and are available on a first-come, first-served basis.



About the Meeting

Wi-Fi Access

Complimentary Wi-Fi is available throughout the convention center. SSID: MCC Wi-Fi or SSID: AES2022. No password is required. Wi-Fi is not available in the exhibit hall.

Note: These wireless networks are not secure and should not be used for sending sensitive information. The bandwidth provided supports casual use for checking emails but does not support streaming.

Photography Release

AES uses photographs of meeting events in its promotional materials. Unless the permission is revoked in writing to AES, by attending, all attendees and visitors agree to the use of their likeness in such materials.

Meeting Policies

Health and Safety

AES is committed to the safety and well-being of our attendees, staff, exhibitors, vendors, and partners. By registering, you agreed to abide by all health and safety protocols designed to mitigate the spread and contraction of COVID-19 in place at the time of the meeting, which may include proof of full COVID-19 vaccination and masking.

Children

Children attending as guests must abide by all health and safety protocols in place at the meeting — including any vaccination, masking, or testing requirements — to receive a guest badge, which is required to enter Music City Center.

To ensure safety and security in the exhibit hall, no children under the age of 12, strollers or carriages (except for those needed by individuals with disabilities), wheeled luggage, or wheeled briefcases are permitted.

AES 2022 Digital Select Platform User Responsibility

All participants in any on-demand aspects of the 2022 AES Annual Meeting, including registrants, faculty, speakers, exhibitors, sponsors, event attendees, and others, are responsible for ensuring that their computers and/or mobile devices, their internet and Wi-Fi capacity, and their electrical/battery support are sufficient to fully engage in any virtual offering(s).

Refunds will not be provided to participants due to technology and/or connectivity problems or outages, whether resulting from the participant's own systems or a more widespread virus or outage.

Video, Photo, or Screen Capture of Event Content

AES strictly prohibits photography, video and audio recordings, and screen captures in all educational sessions. The use of live-streaming software, such as Zoom or live social media feeds, is also prohibited.

Material presented at the AES Annual Meeting may not be reproduced in any format without the express written consent of AES or the otherwise applicable rights holder.

By registering, participants acknowledge and agree that commercial or promotional distribution, publishing, or exploitation of speaker sessions, content, or materials from the event is strictly prohibited.

Violations of the AES recording, video, and image capture policy may result in removal from the session and possible revocation of event registration (for the live event and/or for on-demand access) without refund of any registration or other fees and expenses.

The single exception: Photographs of individual posters are permitted in the in-person poster hall unless a NO PHOTOS placard is on the upper right-hand corner of the poster next to the poster number. It is the responsibility of the registrant to look for and confirm the presence or absence of the NO PHOTOS placard before taking photographs.

In the virtual poster hall, photography, screen captures, or other images of ePosters are prohibited.

Harassment

The American Epilepsy Society (AES) is committed to supporting educational and scientific dialogue, and to fostering a welcoming community in which all participants can contribute fully. Reflecting these values, AES will not tolerate harassment in any form.

We expect all attendees, media, speakers, volunteers, organizers, venue staff, guests, and exhibitors at AES-organized events to help us ensure a safe and positive environment. Anyone violating these rules may be sanctioned or expelled from the conference without a refund at the discretion of the conference organizers. This policy applies to all activities and events where AES is the primary sponsor.

For the full AES anti-harassment policy and for information on how to lodge a concern, please visit the AES website.

Safety and Security Information

The following security measures have been designed to keep you safe during the AES Annual Meeting:

- In an emergency, call the Music City Center Public Safety at 615.401.1300 or pick up any black house phone, which will automatically connect you. Be prepared to advise the dispatcher of our exact location within Music City Center. Please do not call 911 directly.
- Music City Center security may check packages and bags at entrances, in meeting rooms, and in the exhibit hall.
- Due to safety and fire regulations, doors will be closed to session rooms that fill to capacity.
- Security staff will be present throughout the meeting to monitor the safety and security of the hotels, convention center, and attendees.

Congratulations

TO THE 2022 AMERICAN EPILEPSY SOCIETY AWARDEES



Extraordinary Contributions to the Field of Epilepsy Award

George A. Ojemann, MD

Presented during the 20th Annual Judith Hoyer Lecture in Epilepsy
Friday, December 2, 4:00 PM



AES Distinguished Service Award

Samuel Wiebe, MD, FCAHS

Presented during the 20th Annual Judith Hoyer Lecture in Epilepsy
Friday, December 2, 4:00 PM



Fritz E. Dreifuss Award

Professor Terence J. O'Brien, MD, FRACP, FAES

Presented during the Presidential Symposium
Saturday, December 3, 8:45 AM



Rebecca Goldberg Kaufman Award

Jasmine A. Kwasa, PhD

Presented during the Best Practices in Clinical Epilepsy Symposium
Saturday, December 3, 5:30 PM



AES Founders Award

Elinor Ben-Menachem, MD, PhD, FAAN, FAES

Presented during the Merritt-Putnam Symposium
Monday, December 5, 8:45 AM



Basic Science Research Award

Lori L. Isom, PhD, FAES

Presented during the Lombroso Lecture
Monday, December 5, 2:00 PM



Clinical Science Research Award

Gregory A. Worrell, MD, PhD

Presented during the Lombroso Lecture
Monday, December 5, 2:00 PM



Lombroso Lecturer

Fernando Cendes, MD, PhD, FAES

Presented during the Lombroso Lecture
Monday, December 5, 2:00 PM



J. Kiffin Penry Award for Excellence in Epilepsy Care

Elaine Wyllie, MD, FAES

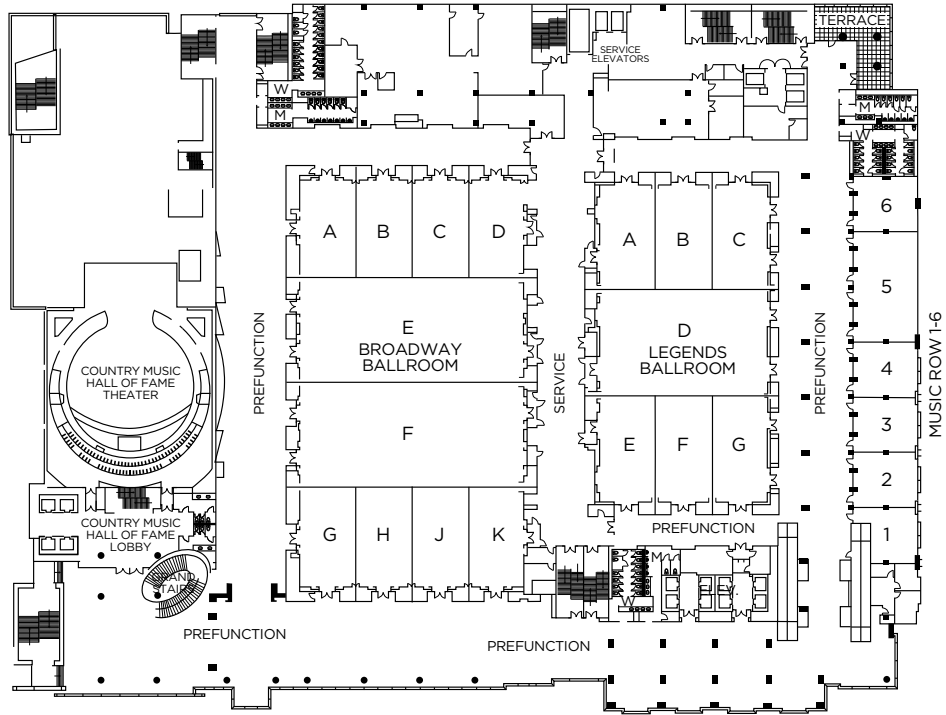
Presented during the Epilepsy Therapies Symposium
Saturday, December 3, 2:15 PM

Hotel Event Map

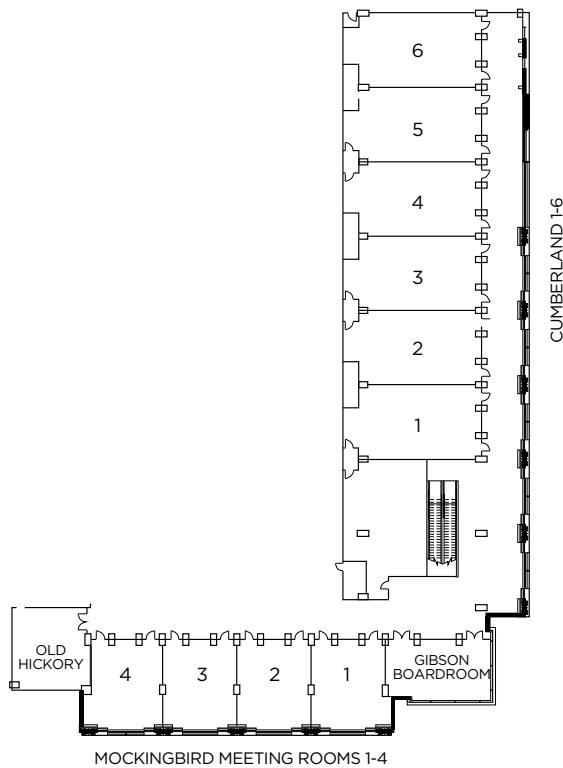
Omni Nashville Hotel

250 Rep. John Lewis Way

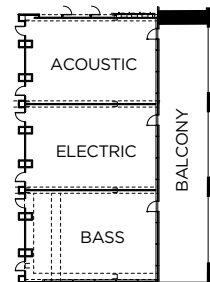
LEVEL TWO



LEVEL THREE

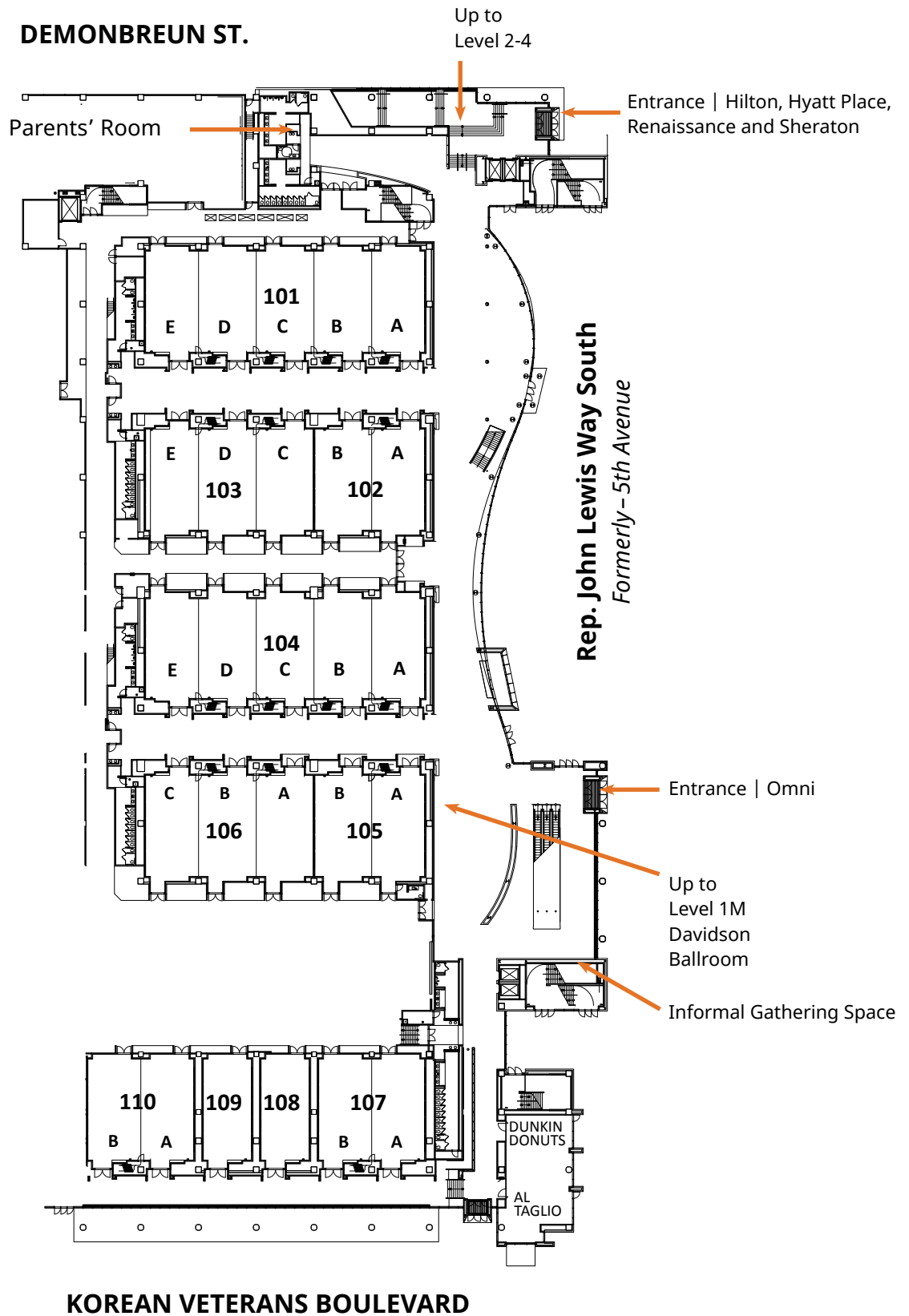


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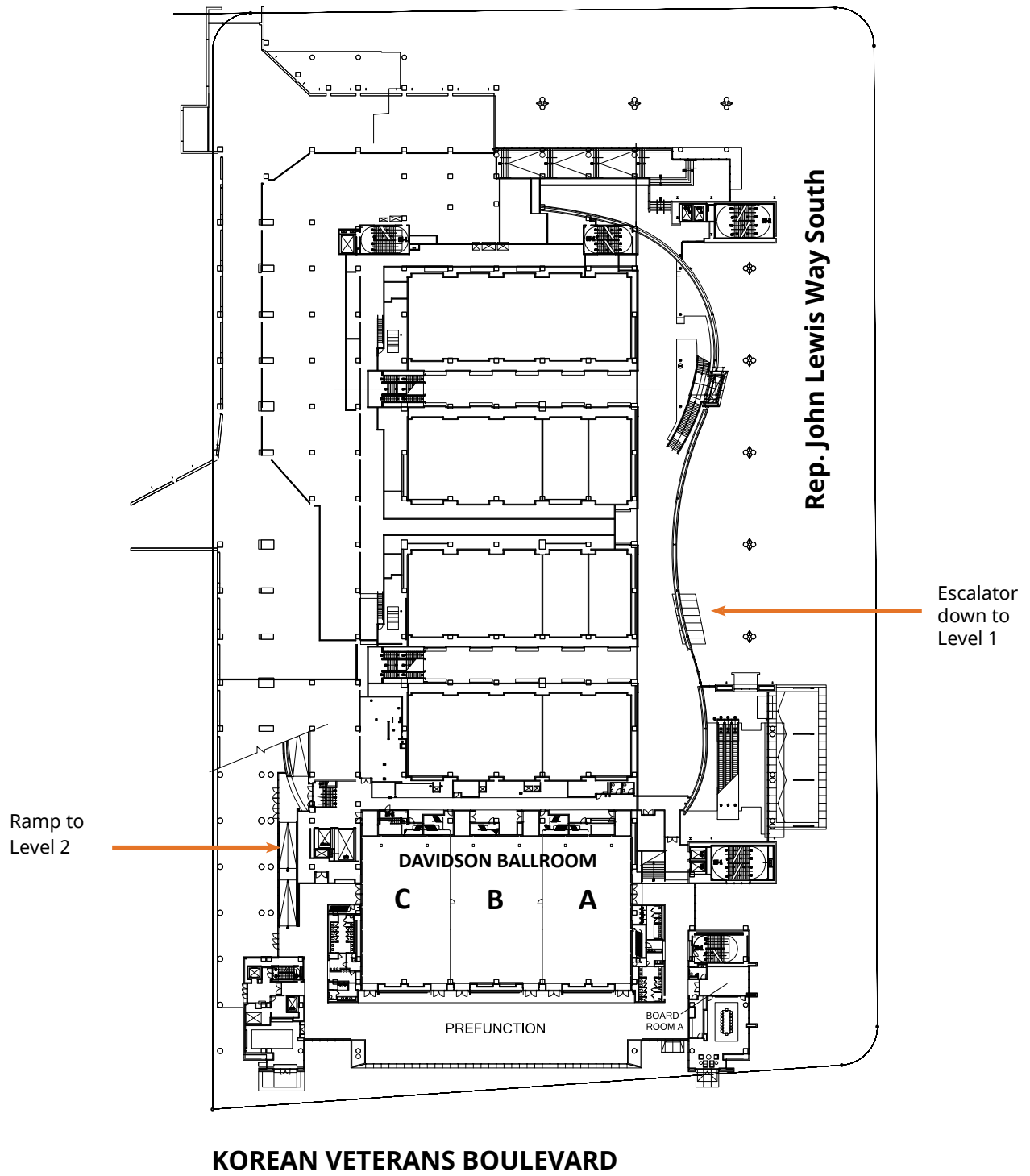


Music City Center

LEVEL 1

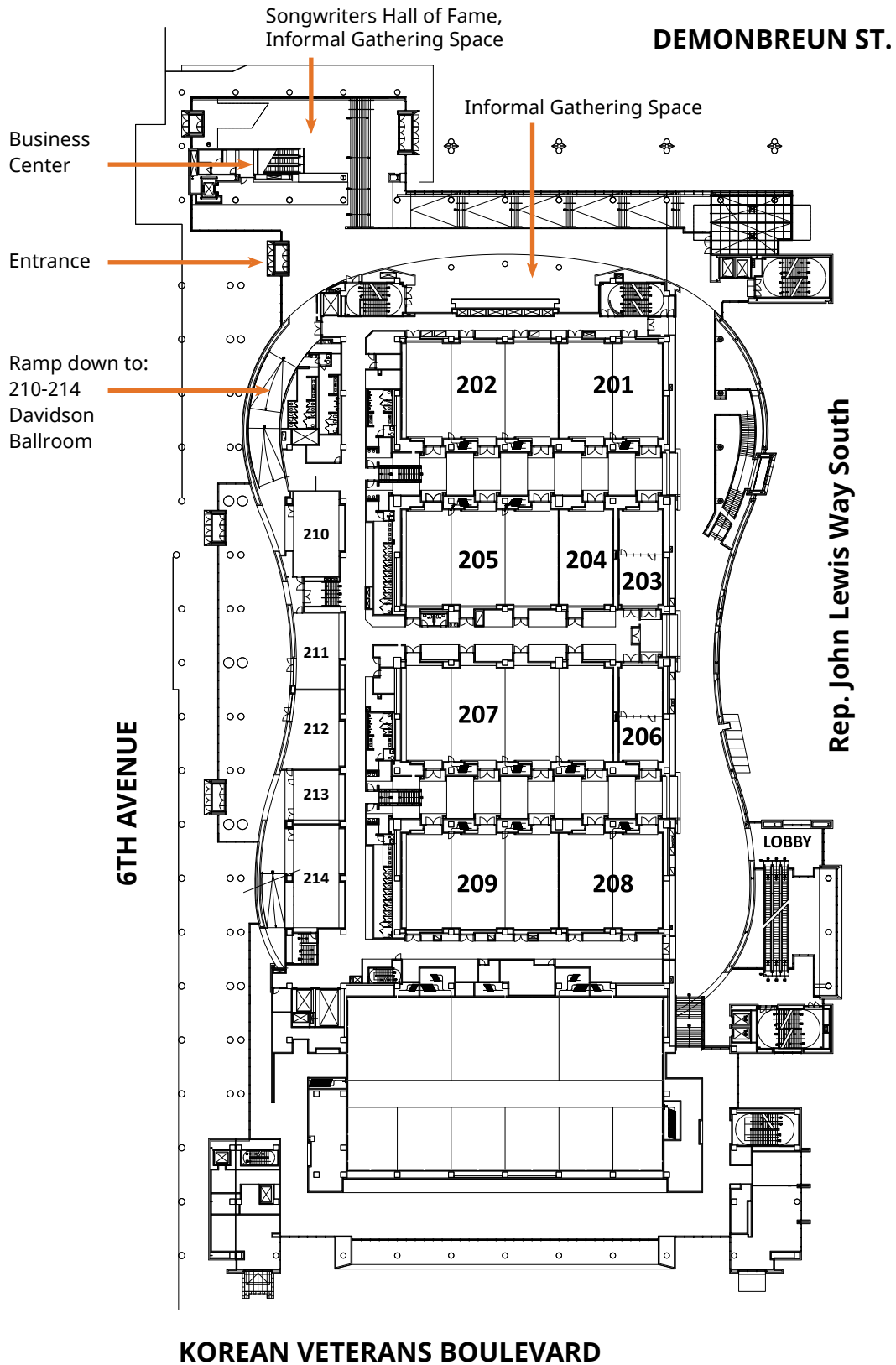


LEVEL 1M

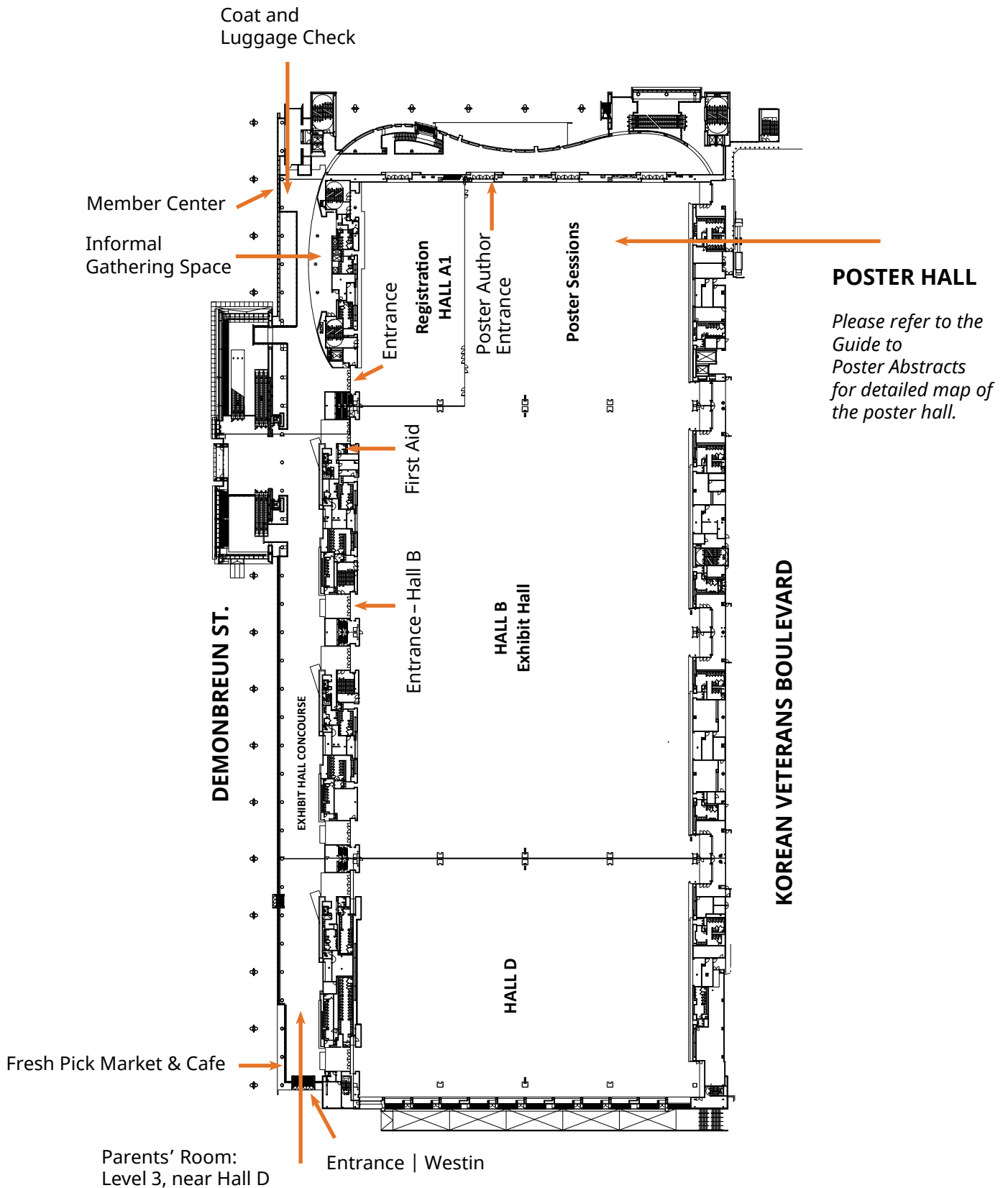


Music City Center

LEVEL 2



LEVEL 3

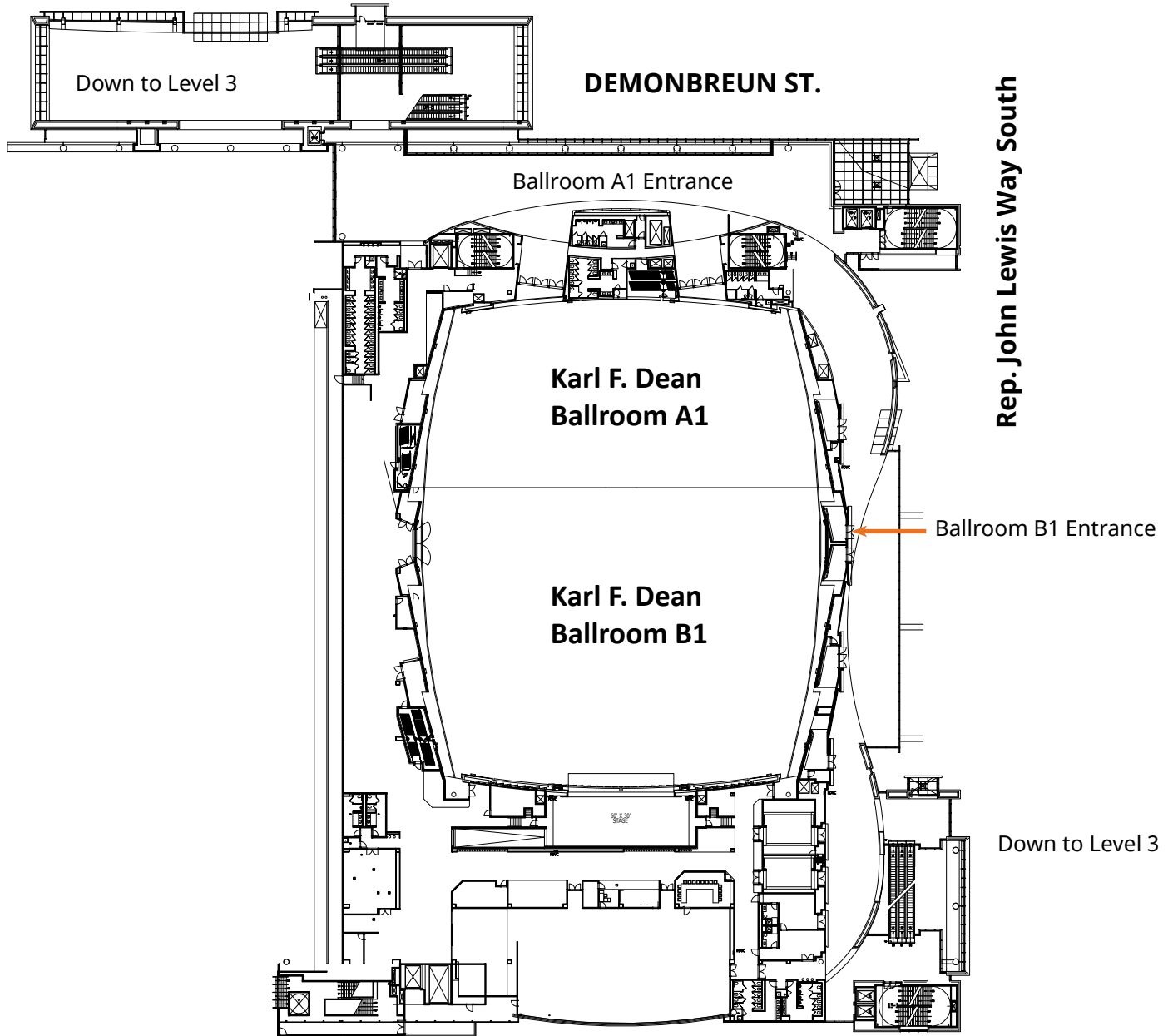


POSTER HALL

Please refer to the Guide to Poster Abstracts for detailed map of the poster hall.

Music City Center

LEVEL 4



AES RESEARCH GRANTS

Thanks to the generosity of AES members, donors, and non-profit partners, AES is one of the largest non-governmental funders for those starting careers in epilepsy research.

FOR EARLY CAREER INVESTIGATORS

\$150,000 over two years	Sergievsky Award for Epilepsy Health Equity and Diversity
Up to \$30,000	Predocctoral Research Fellowships
Up to \$50,000	Postdoctoral Research Fellowships
Up to \$50,000	Junior Investigator Research Awards
Up to \$50,000	Research and Training Fellowship for Clinicians
Up to \$50,000	Pediatric Research and Training Fellowship for Clinicians, funded by AES and Pediatric Epilepsy Research Foundation
Up to \$22,000	Epilepsy Study Consortium Mini-Grants
\$150,000 over two years	Susan S. Spencer, MD, Clinical Research Training Fellowship in Epilepsy (<i>not currently accepting proposals</i>)

FOR ESTABLISHED INVESTIGATORS

The application period for these grants will open in early 2023.

Up to \$50,000	AES Infrastructure Grants
Up to \$20,000	AES Seed Grants
Amounts Vary	Research and Training Workshop Grants

85% of our research grant dollars support early career scientists working across the full spectrum of epilepsy research.

AES is proud to partner with these non-profit organizations to support highly reviewed proposals that align with the organizations' research priorities.



Learn more at aesnet.org/research

About the Education Program

Statement of Need

The need for this activity has been determined based on identifying professional practice gaps, previous course evaluations, and AES self-assessments. The educational content of this activity was based upon current issues and topics provided by the AES Annual Meeting Committee and membership.

Target Audience

Neurologists, epileptologists, pediatric neurologists, nurses, psychologists, neuropsychologists, nurse practitioners, physician assistants, pharmacists, researchers, and scientists.

Global Learning Objectives

This comprehensive educational meeting provides learners with opportunities to:

- Increase knowledge about the diagnosis and treatment—including novel diagnostic methods and therapeutic modalities of various manifestations of epilepsy and common comorbidities—to enhance clinical practice and improve patient outcomes.
- Be informed about the latest research developments in epilepsy that may translate into clinical care and human therapy in the near future.
- Consider the public health implications of epilepsy and the impact of the disease on patients, communities, and health systems.

Note: Each session has its own specific learning objectives which can be found in the program book and on the app.

Mission Statement

The American Epilepsy Society promotes research and education for physicians and other healthcare professionals dedicated to the prevention, treatment, and cure of epilepsy. Its continuing professional education (CPE) offers an array of activities to assist the learner in assessing their educational needs and expanding their knowledge, competence, and performance in the field of epilepsy, which leads to an improvement in the outcomes of care.

The CPE program always reinforces the fundamental components of epilepsy care in accordance with an epilepsy core curriculum, including quality improvement and patient safety. In addition, its educational interventions also provide an opportunity to advance professional practice in new and emerging areas of the specialty. In recognition of the importance of the added qualification in epilepsy by the American Board of Psychiatry and Neurology, as well as the Maintenance of Certification requirements, AES is committed to the provision of educational opportunities and tools that aid in certification and MOC requirements.

The expected results of the AES program of continuing professional development are as follows:

- The AES CPE Program fosters a culture of interprofessional collaboration amongst the cadre of professionals that care for persons with epilepsy.
- The AES CPE Program enhances the professional practice of healthcare professionals who care for persons with epilepsy.
- The AES CPE Program provides education in epilepsy therapy to increase the competence of clinicians, scientists, and researchers in the use of complex and multi-layered options to help in the management of patients with epilepsy.
- The AES CPE Program uses educational interventions as a tool to improve the quality of care and patient safety of persons with epilepsy.

Accreditation

This live activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME). AES is accredited by the ACCME to provide continuing medical education for physicians.

AMA PRA Category 1 Credit™ Designation

AES designates this live activity for a maximum of 39.5 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

The American Medical Association has determined that non-U.S. licensed physicians who participate in this CME activity are eligible for AMA PRA Category 1 Credits™.

Physician Assistants

AAPA accepts certificates of participation for educational activities certified for AMA PRA Category 1 Credits™ from organizations accredited by ACCME or a recognized state medical society. Physician assistants may receive a maximum of 39.5 hours of Category 1 credit for completing this program.

Continuing Education for Nurses and Pharmacists

In support of improving patient care, this activity is planned and implemented by the National Center for Interprofessional Practice and Education's Office of Interprofessional Continuing Professional Development (OICPD) and the American Epilepsy Society. The OICPD is accredited by the Accreditation Council for Pharmacy Education (ACPE) and the American Nurses Credentialing Center (ANCC) to provide continuing education for the healthcare team.

This activity is eligible for ANCC and ACPE credit. At the time this program book went to print, the accreditation application was still under review by the Office of Interprofessional Continuing Professional Development (OICPD). Please see the AES website for a full list of accredited sessions.

About the Education Program

Maintenance of Certification

The American Board of Psychiatry and Neurology has reviewed the *AES 2022 Annual Meeting* and has approved this activity as part of a comprehensive Continuing Medical Education (CME) activity, which is mandated by the ABMS as a necessary component of Continuing Certification.

Evaluation and Credit Claim

Those who participate in the live meeting can claim up to 39.5 *AMA PRA Category 1 Credits*[™]. Live meeting participants may also claim credit for select on-demand sessions in Digital Select, totaling up to 73 *AMA PRA Category 1 Credits*[™].

Disclosure Policy and Resolution of Conflicts of Interest

It is the policy of the American Epilepsy Society to ensure balance, independence, objectivity, and scientific rigor. All individuals involved in the planning, development, and presentation of CME content are required to disclose any relevant financial relationships with ineligible companies. In accordance with the ACCME Standards for Integrity and Independence in Accredited Continuing Education, AES has implemented the mechanisms of prospective peer review of this CME activity to identify and mitigate any relevant financial relationships. Additionally, the content of this activity is based on the best available evidence.

Planner and faculty disclosures can be found on the Annual Meeting website. All relevant financial relationships have been mitigated.

Unapproved Use Disclosure

The American Epilepsy Society requires CME authors to disclose to learners when products or procedures being discussed are off-label, unlabeled, experimental, and / or investigational (not FDA approved) and any limitations on the information that is presented, such as data that are preliminary or that represent ongoing research, interim analyses, and / or unsupported opinion. This information is intended solely for continuing medical education and is not intended to promote off-label use of these medications. If you have questions, contact the medical affairs department of the manufacturer for the most recent prescribing information. Information about pharmaceutical agents / devices that is outside of U.S. FDA-approved labeling may be contained in this activity.

Disclaimer

This CME activity is for educational purposes only and does not constitute the opinion or endorsement of, or promotion by, the American Epilepsy Society. Reasonable efforts have been taken to present educational subject matter in a balanced, unbiased fashion, and in compliance with regulatory requirements.

However, each activity participant must always use his or her own personal and professional judgment when considering further application of this information, particularly as it may relate to patient diagnostic or treatment decisions including, without limitation, FDA-approved uses and any off-label, investigational, and / or experimental uses.

Annual Meeting Sessions

The AES Annual Meeting offers high-quality educational programming across diverse work settings, professional roles, and experience levels. Whether you are just starting with the specialty, have a limited background in epilepsy, or are highly fluent with complex topics, you will find sessions and content relevant to your needs.

Session Types

Annual Course: Encourages in-depth exploration of important topics related to epilepsy, focused on clinical care, including review of the science underlying the topics, reviews of clinical research, and discussion of the associated clinical implications. The Annual Course includes a mixture of educational lectures, clinical vignettes, and panel discussions.

Basic Science Skills Workshops: Deliver learning opportunities on basic science research techniques and methodologies. Attendees will learn about approaches and applications they can incorporate into their own research. *Included in meeting registration fee.*

Clinical Skills Workshops: Deliver hands-on and interactive learning opportunities in focused clinical areas. Attendance at each workshop is limited to a small number of participants to allow optimal interaction. *Advance registration and an additional fee are required.*

Dialogues to Transform Epilepsy: This session introduces transformative neurobiological research from outside the epilepsy field, with discussions on how those advances could accelerate progress in epilepsy.

Epilepsy Fellowship Program Directors Meeting: Provides a forum for current clinical epilepsy program directors, clinical neurophysiology program directors, and those interested in starting an ACGME Fellowship, to address challenges in running a program and meeting accreditation requirements. This session will meet ACGME program requirement II.A.4.

Investigators Workshops (IW): Highlight exciting developments in basic, translational, and clinical epilepsy research in a format promoting interactive discussion. Speakers include established and junior epilepsy investigators, as well as researchers from other fields.

About the Education Program

Session Types

(continued)

Poster Sessions: Posters are grouped by general topic category at various times throughout the meeting. Poster authors are available for discussion during each session. Check the program for author present times. In addition, the following special poster sessions offer additional times to interact with authors:

Poster Walking Tours: Tours of selected posters led by leading experts in topic areas.

Basic Science Poster Session: This session features the most exciting and innovative studies focused on understanding the basic mechanisms of epilepsy and using cutting edge approaches to understand and treat the mechanisms of epilepsy.

Platform Sessions: Three concurrent sessions highlighting selected key scientific abstracts consisting of author presentations followed by Q&A.

Pediatric Epilepsy Highlight Session: This session showcases scientific abstracts focused on topics in clinical care and research in pediatric epilepsy.

Broadening Representation Inclusion and Diversity by Growing Equity (BRIDGE): This session spotlights research relating to the needs of underserved populations along with showcasing the work of accomplished investigators who identify with groups historically under-represented in medicine and research.

Professional Development: Offers mentorship, training, and information geared to early career professionals or anyone considering a career change.

Special Interest Groups (SIG): Offer information and networking for attendees with similar interests, in sessions organized by AES members. Although the sizes of SIG sessions vary, all lend themselves to active participation and dialogue.

Special Lectures: Recognize the accomplishments of distinguished leaders in clinical epilepsy and research and / or highlight current developments in the field.

Symposia: Provide the major educational activities at the Annual Meeting. Topics range from clinically oriented presentations reviewing common issues in epilepsy to more complex topics combining basic sciences and clinical neurology. While target audiences differ, all symposia include discussion of clinically relevant information.

Industry Support

For a list of educational activities supported in part by industry medical education grants, please visit aesnet.org/med-ed or scan this QR code.



AES



EDUCATION

Year-round learning. More than just the meeting.

Keeping up with CME requirements and the ever-evolving field of epilepsy requires year-round opportunities to earn CME and further develop your skills and knowledge. AES is here to help!

AES offers a variety of online education activities all year long to assist epilepsy professionals in fulfilling their continuing education requirements and staying ahead of the curve.

- Webinars
- Self-Assessment Activities
- PI-CME Activities
- eModules
- Annual Meeting Recordings
- Fellowship Curriculum
- ... and more!


New in 2022 and Now Available On-Demand

Webinars

- Real World Experience and Tips for Treatment with the Latest ASMs
- New Research and Clinical Insights Utilizing Ambulatory ECoG from RNS
- Autoimmune Epilepsy: Dilemmas and Challenges with the Diagnostic Workup
- The Role of Magnetic Resonance Imaging (MRI) in Epilepsy
- The Path to Equitable Care in Epilepsy

eModules

- Weaning Antiseizure Medications
- Treatment of Catamenial Epilepsy

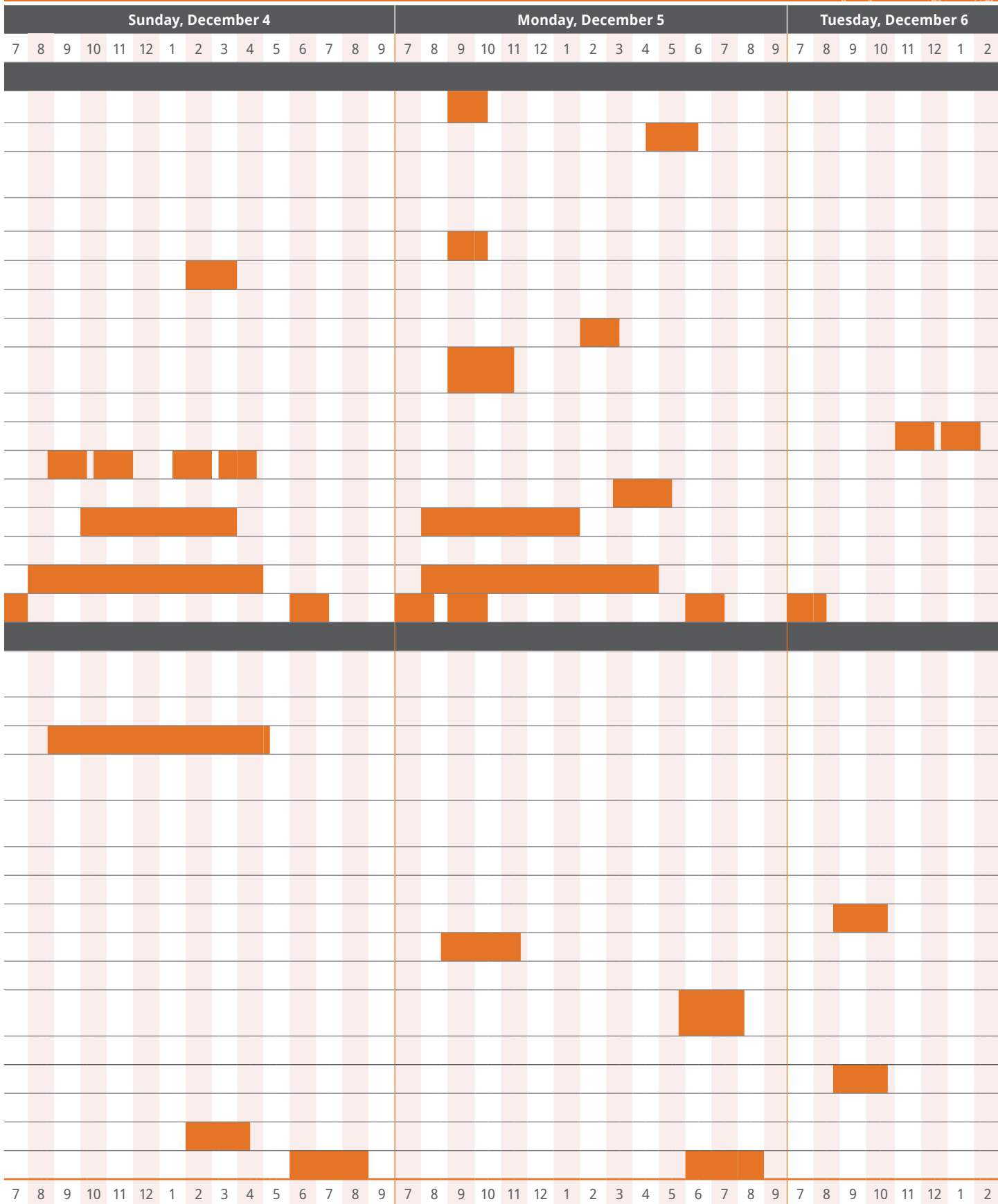
A background image of a smiling woman with braided hair, wearing a light-colored top, set against a warm, orange-toned background. The image is partially obscured by a large, semi-transparent circular graphic on the right side.

Visit aesnet.org/learn to learn about the resources above and more!

Meeting at-a-Glance

Session Name	Friday, December 2									Saturday, December 3																			
	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	7	8	9	10	11	12	1	2	3	4	5	6	7	8
Special Lectures																													
AES-NAEC Joint Coding Session																													
Dialogues to Transform Epilepsy																													
Epilepsy Fellowship Program Directors Meeting																													
Epilepsy Research Benchmarks																													
ILAE-WHO Session																													
IOM-NAM 10 th Anniversary																													
Judith Hoyer Lecture																													
Lombroso Lecture																													
Sleep and Epilepsy Across the Lifespan																													
Basic Science Skills Workshops																													
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Poster Sessions																													
Professional Development																													
Scientific Exhibits																													
SIG Sessions																													
Symposia																													
Advanced Practice Provider Symposium																													
AES-CNF Symposium																													
Annual Course																													
Annual Fundamentals Symposium																													
Best Practices in Clinical Epilepsy Symposium																													
Epilepsy Specialist Symposium																													
Epilepsy Therapies Symposium																													
Hot Topics Symposium																													
Merritt Putnam Symposium																													
Neurosurgery Symposium																													
Pediatric State of the Art Symposium																													
Presidential Symposium																													
Scientific Symposium																													
Spanish Symposium																													
Susan Spencer Symposium																													
Industry Satellite Symposia																													

Meeting at-a-Glance



Accredited Continuing Education

The following programs offer CME credit.

Please see daily schedule for program details.

Note: The application for nursing and pharmacy CE credits is pending approval from the Office of Interprofessional Continuing Professional Development. Please refer to aesnet.org/AES2022-accredited for a complete list of accredited sessions.

Epilepsy Specialist Symposium | What is a Seizure After All?

Friday, December 2 | 8:30–11:30 AM

Music City Center, Karl F. Dean Ballroom B1, Level 4



CME & CE

AES-CNF Symposium | Genetic Testing in Epilepsy: Improving Outcomes and Informing Gaps in Research

Friday, December 2 | 9:00 AM–12:00 PM

Music City Center, Room 104 C, Level 1



CME & CE

Annual Fundamentals Symposium | Beyond Seizure Treatment: Tapping Into the Community for Care

Friday, December 2 | 12:30–3:00 PM

Music City Center, Karl F. Dean Ballroom B1, Level 4



CME & CE

Special Lecture | Epilepsy Fellowship Program Directors Meeting

Friday, December 2 | 1:00–3:00 PM

Music City Center, Room 202 B, Level 2



CME

SIG | Clinical Epilepsy for the Advanced Practice Provider: Subspecialty Clinics— Leveraging APPs to Improve Access

Friday, December 2 | 1:30–3:00 PM

Music City Center, Room 106 B, Level 1



CME & CE

SIG | Developmental and Epileptic Encephalopathies (DEE): Developmental and Epileptic Encephalopathy — From Diagnostic to Treatment Odyssey

Friday, December 2 | 1:30–3:00 PM

Music City Center, Room 204, Level 2



CME & CE

SIG | Global Health: Optimizing Epilepsy Care in Areas in Need — Training and Program Building

Friday, December 2 | 1:30–3:00 PM

Music City Center, Room 208 A, Level 2



CME & CE

Spanish Symposium | Seizures and Use of Electroencephalography (EEG) in the ICU

Friday, December 2 | 2:30–5:00 PM

Music City Center, Room 105 A, Level 1



CME & CE

Special Lecture | 20th Judith Hoyer Lecture in Epilepsy: Children Are Different—Advances in Early Life Epilepsy Assessment, Treatment, and Outcomes

Friday, December 2 | 4:00–5:30 PM

Music City Center, Karl F. Dean Ballroom B1, Level 4



CME & CE

Special Lecture | Dobbs v. Jackson: Impact on Reproductive Health in Epilepsy

Friday, December 2 | 5:30–8:00 PM

Music City Center, Karl F. Dean Ballroom A1, Level 4



CME & CE

SIG | Cognitive and Behavioral Treatment for Epilepsy: Disparities in Cognitive Behavioral Therapy

Friday, December 2 | 6:00–7:30 PM

Music City Center, Room 204, Level 2



CME & CE

SIG | Critical Care Epilepsy: Status Epilepticus Management — Beyond Anti-seizure Medications and Anesthetics

Friday, December 2 | 6:00–7:30 PM

Music City Center, Room 105, Level 1



CME & CE

SIG | Magnetoencephalography (MEG): From Spikes to Seizures to Networks — Magnetoencephalography in Focal Epilepsy

Friday, December 2 | 6:00–7:30 PM

Music City Center, Room 208 A, Level 2



CME & CE

SIG | Children's Hour: Pushing Boundaries: Epilepsy Surgery in Infants and Young Children

Saturday, December 3 | 7:00–8:30 AM

Music City Center, Room 106 B, Level 1



CME & CE

SIG | Data Science in Epilepsy: Open Data Ecosystems — Language, Tools, and Pipelines for Open Science in Epilepsy

Saturday, December 3 | 7:00–8:30 AM

Music City Center, Room 204, Level 2



CME

Accredited Continuing Education

SIG | Genetics: Prophecy or Empiric? Clinical Value of Predicting Versus Determining Genetic Variant Dysfunction

Saturday, December 3 | 7:00–8:30 AM

Music City Center, Room 105 A, Level 1

 **CME & CE**

SIG | Neuroimaging: Imaging of Cognitive Reorganization in Epilepsy

Saturday, December 3 | 7:00–8:30 AM

Music City Center, Room 104 A, Level 1

 **CME**

SIG | Pregnancy Outcomes: Neurocognitive Outcomes in Adolescents, Fertility, Depression, and Folic Acid Use

Saturday, December 3 | 7:00–8:30 AM

Music City Center, Room 202 B, Level 2

 **CME & CE**

SIG | Stereoelectroencephalography (sEEG): sEEG Methodology Applied to Temporal Lobe Epilepsies

Saturday, December 3 | 7:00 AM–8:30 PM

Music City Center, Karl F. Dean Ballroom A1, Level 4

 **CME & CE**

Presidential Symposium | Seizure Semiology: The Jacksonian March to the Present

Saturday, December 3 | 8:45–11:45 AM

Music City Center, Karl F. Dean Ballroom B1, Level 4

 **CME & CE**

Advanced Practice Providers Symposium | Medication Dilemmas: Practical Approaches to Pharmacological Management of Epilepsy

Saturday, December 3 | 2:15–4:45 PM

Music City Center, Karl F. Dean Ballroom A1, Level 4

 **CME & CE**

Epilepsy Therapies Symposium | New Approaches to Drug Resistant Epilepsy

Saturday, December 3 | 2:15–4:45 PM

Music City Center, Karl F. Dean Ballroom B1, Level 4

 **CME & CE**

Investigators Workshop | Advances of the Lafora Epilepsy Cure Initiative: A Research Pathway to Treat and Cure Other Epilepsies

Saturday, December 3 | 5:30–7:00 PM

Music City Center, Room 104 C, Level 1

 **CME & CE**

Best Practices in Clinical Epilepsy Symposium | Access to Care for the Underserved Managing Epilepsy

Saturday, December 3 | 5:30–8:00 PM

Music City Center, Karl F. Dean Ballroom A1, Level 4

 **CME & CE**

Neurosurgery Symposium | Epilepsy Surgery Controversies: A Case-based Discussion

Saturday, December 3 | 5:30–8:00 PM

Music City Center, Karl F. Dean Ballroom B1, Level 4

 **CME & CE**

Annual Course | Epilepsy in the Era of Personalized Medicine

Sunday, December 4 | 8:45 AM–5:15 PM

Music City Center, Karl F. Dean Ballroom B1, Level 4

 **CME & CE**

Investigators Workshop | Non-Seizure Outcomes in Developmental and Epileptic Encephalopathies

Sunday, December 4 | 10:30 AM–12:00 PM

Music City Center, Room 209 B, Level 2

 **CME**

Investigators Workshop | Riding the Wave: Current and Future Contributions of Zebrafish Models to Epilepsy Research

Sunday, December 4 | 1:30–3:00 PM

Music City Center, Room 209 B, Level 2

 **CME**

Susan Spencer Symposium | Patient-Centered Research: Over A Decade of Impact on Practice

Sunday, December 4 | 2:00–4:30 PM

Music City Center, Karl F. Dean Ballroom A1, Level 4

 **CME & CE**

Investigators Workshop | Iatrogenic Epilepsy and Encephalopathy in Immune Therapies for Cancer

Sunday, December 4 | 3:15–4:45 PM

Music City Center, Room 209 B, Level 2

 **CME & CE**

Investigators Workshop | Interaction between Physiological and Pathological Oscillations in Memory

Sunday, December 4 | 3:15–4:45 PM

Music City Center, Room 105 A, Level 1

 **CME**

Accredited Continuing Education

SIG | Ictal Semiology: Generators of Seizure Semiology — Localization and Propagation Patterns

Sunday, December 4 | 6:00–7:30 PM

Music City Center, Karl F. Dean Ballroom A1, Level 4



CME & CE

SIG | Women's Issues in Epilepsy: Aging, Menopause, and Bone Health in Women with Epilepsy

Sunday, December 4 | 6:00–7:30 PM

Music City Center, Room 104 C, Level 1



CME & CE

SIG | Epilepsy Surgery: Neuromodulation — Techniques, Challenges, and Opportunities

Monday, December 5 | 7:00–8:30 AM

Music City Center, Room 102 A, Level 1



CME & CE

SIG | Neuropsychology: Big Data in Cognition in Epilepsy — Clinical and Research Utility

Monday, December 5 | 7:00–8:30 AM

Music City Center, Room 205 B, Level 2



CME & CE

SIG | Seizures in Autoimmune Encephalitis: Focus on Diagnosis and Treatment Trials

Monday, December 5 | 7:00–8:30 AM

Music City Center, Room 104 C, Level 1



CME & CE

Merritt-Putnam Symposium | Recent Insights into Epileptic Networks and Clinical Implications

Monday, December 5 | 8:45–11:45 AM

Music City Center, Karl F. Dean Ballroom B1, Level 4



CME & CE

Special Lecture | AES-NAEC Joint Coding Session: Coding and Reimbursement Policies of Interest to Epileptologists and Epilepsy Centers

Monday, December 5 | 9:00–10:30 AM

Music City Center, Room 106 B, Level 1



CME & CE

SIG | Psychosocial Comorbidities: Autism and Epilepsy — From Theory to Practice

Monday, December 5 | 9:00–10:30 AM

Music City Center, Room 209 B, Level 2



CME & CE

SIG | Seizures and Cerebrovascular Disease: Seizures After Stroke — Location, Reperfusion, Risk Stratification, and Biomarkers

Monday, December 5 | 9:00–10:30 AM

Music City Center, Room 205 B, Level 2



CME & CE

SIG | Temporal Lobe Club: Novel Surgical Therapies

Monday, December 5 | 9:00–10:30 AM

Music City Center, Room 104 C, Level 1



CME & CE

Special Lecture | Sleep and Epilepsy Across the Lifespan

Monday, December 5 | 9:00–11:30 AM

Music City Center, Karl F. Dean Ballroom A1, Level 4



CME & CE

Pediatric State of the Art Symposium | Addressing Knowledge Gaps in Early Life Epilepsy

Monday, December 5 | 5:45–8:15 PM

Music City Center, Karl F. Dean Ballroom B1, Level 4



CME & CE

SIG | Tuberous Sclerosis: Tuberous Sclerosis Complex (TSC) Classification — Clinical, Physiologic, Genetic, Imaging Prognostic Features

Monday, December 5 | 6:00–7:30 PM

Music City Center, Room 202 B, Level 2



CME & CE

SIG | Tumor-Related Epilepsy (TRE): Establishing Standards of Care in Medical Management

Monday, December 5 | 6:00–7:30 PM

Music City Center, Room 102 A, Level 1



CME & CE

SIG | EEG: What is an Epileptiform Discharge?

Tuesday, December 6 | 7:00–8:30 AM

Music City Center, Room 204, Level 2



CME

SIG | Epilepsy and Aging: Pharmacotherapy Challenges in Managing Older Adults and Elderly with Epilepsy

Tuesday, December 6 | 7:00–8:30 AM

Music City Center, Room 105 A, Level 1



CME & CE

Accredited Continuing Education

SIG | Pediatric Epilepsy Case Discussions: Complex and Intractable Infantile Onset Epilepsy – A Medical and a Surgical Case

Tuesday, December 6 | 7:00–8:30 AM
Music City Center, Room 102 A, Level 1



SIG | Psychogenic Non-Epileptic Seizures (PNES): Update on Neuroimaging of PNES and Other Functional Neurological Disorders (FNDs)

Tuesday, December 6 | 7:00–8:30 AM
Music City Center, Room 106 B, Level 1



Hot Topics Symposium | From Traumatic Brain Injury to Post-traumatic Epilepsy and its Co-morbidities

Tuesday, December 6 | 8:45–10:45 AM
Music City Center, Karl F. Dean Ballroom B1, Level 4



Scientific Symposium | The Many Facets of Neurodegeneration in Epilepsy

Tuesday, December 6 | 8:45–10:45 AM
Music City Center, Karl F. Dean Ballroom A1, Level 4



AES Epilepsy Fellowship In-Service Training Examination (EpiFITE)



Assess your trainees' knowledge of epilepsy treatment, identify areas for growth, and prepare for the 2023 ABPN Epilepsy Certification Exam!

REGISTRATION NOW OPEN FOR EPIFITE 2023

Learn more at aesnet.org/epifite

11TH ANNUAL AES WINE TASTING AND SILENT AUCTION

Saturday, December 3, 2022 | 7:00 - 10:00 PM

Liberty Common
207 1st Avenue S.
Nashville, TN 37201

- \$175 per ticket
- \$99 for Student and Trainee registrants

Sample extraordinary wines from around the world paired with innovative hors d'oeuvres. All proceeds benefit the Lennox and Lombroso Trust and the Susan S. Spencer Fund, which support AES research programs.

Tickets available at the AES registration desk and at aesnet.org/wine-event.

The 2022 AES Wine Tasting and Silent Auction is supported by SK Life Science, Inc.

APPLY NOW!

Sergievsky Award for Epilepsy Health Equity and Diversity

Do you know any early career epilepsy physicians or scientists from under-represented racial and ethnic groups who could benefit from a research fellowship, plus career-advancing mentorship and visibility?

The *AES Sergievsky Award for Epilepsy Health Equity and Diversity* is designed to recognize and provide career support, including a \$75,000 per year grant for two years, for talented epilepsy professionals from under-represented groups and/or who are researching issues that affect medically underserved individuals with epilepsy or seizures or related aspects of health equity.

Applications are due **Thursday, January 12, 2023**.
aesnet.org/sergievsky

AES 2022 Digital Select



AES 2022 Digital Select offers on-demand recordings of select AES 2022 programming totaling approximately 120 hours and offering up to 73 CME credits. Digital Select also includes access to ePosters.

Digital Select content and ePosters will be available in the meeting app on Tuesday, December 13, and will be available for 90 days to all in-person attendees (with the exception of one-day registrants).

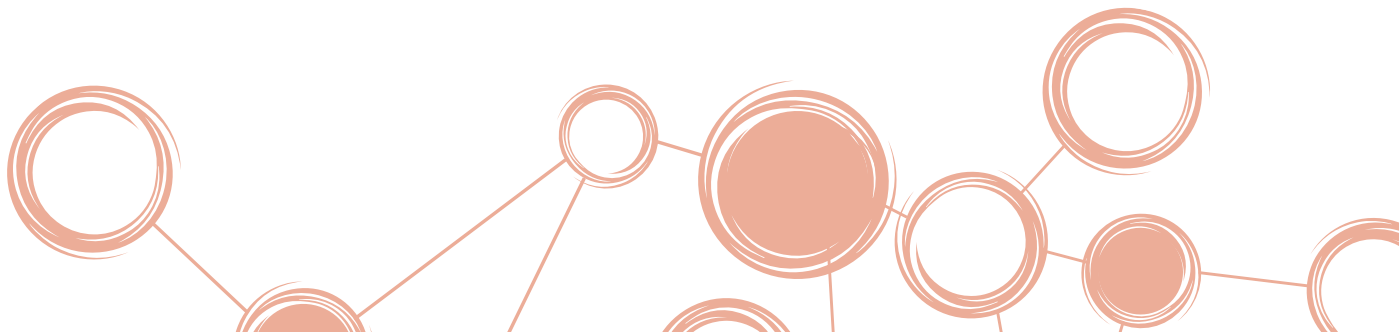
Recorded Sessions		
Session Name	Live	On-Demand
Professional Development Career Skills: Interdisciplinary Team Building	✓	
Epilepsy Specialist Symposium What is a Seizure After All?	✓	✓
Professional Development Career Pathways: Clinical Care Emphasis Panel	✓	
Professional Development Career Pathways: Interprofessional Panel	✓	
Professional Development Career Pathways: Research Emphasis Panel	✓	
Professional Development Career Skills: Surviving First Year as Faculty/Attending	✓	
Special Lecture Epilepsy Research Benchmarks: Understanding Underlying Mechanisms of Epilepsy and Its Comorbid Conditions	✓	✓
Annual Fundamentals Symposium Beyond Seizure Treatment: Tapping into the Community for Care	✓	✓
Special Lecture Epilepsy Fellowship Program Directors Meeting	✓	✓
SIG Clinical Epilepsy for the Advanced Practice Provider: Subspecialty Clinics— Leveraging APPs to Improve Access	✓	✓
SIG Developmental and Epileptic Encephalopathies (DEE): Developmental and Epileptic Encephalopathy — from Diagnostic to Treatment Odyssey	✓	
SIG Global Health: Optimizing Epilepsy Care in Areas in Need — Training and Program Building	✓	
AES-CNF Symposium Genetic Testing in Epilepsy: Improving Outcomes and Informing Gaps in Research	✓	✓
Spanish Symposium Seizures and Use of EEG in the ICU	✓	✓
Special Lecture 20th Judith Hoyer Lecture in Epilepsy: Children are Different – Advances in Early Life Epilepsy Assessment, Treatment, and Outcomes	✓	✓
Basic Science Skills Workshop Addressing Sex as a Biological Variable in Epilepsy and Beyond	✓	✓
Basic Science Skills Workshop Immune Cells	✓	✓
Special Lecture Dobbs v. Jackson in Epilepsy	✓	✓
SIG Cognitive and Behavioral Treatment for Epilepsy: Disparities in Cognitive Behavioral Therapy	✓	
SIG Critical Care Epilepsy: Status Epilepticus Management — Beyond Anti-seizure Medications and Anesthetics	✓	✓
SIG Magnetoencephalography (MEG): From Spikes to Seizures to Networks — Magnetoencephalography in Focal Epilepsy	✓	
Professional Development Career Skills: How to Apply for Early Career Grants: Nuts and Bolts	✓	✓
SIG Children's Hour: Pushing Boundaries: Epilepsy Surgery in Infants and Young Children	✓	✓
SIG Data Science in Epilepsy: Open Data Ecosystems — Language, Tools, and Pipelines for Open Science in Epilepsy	✓	
SIG Genetics: Prophecy of Bioinformatics vs Functional Modeling in Predicting Variant Function	✓	✓
SIG Neuroimaging: Imaging of Cognitive Reorganization in Epilepsy	✓	
SIG Pregnancy Outcomes: Neurocognitive Outcomes in Adolescents, Fertility, Depression, and Folic Acid Use	✓	✓
SIG Stereoelectroencephalography (sEEG): sEEG Methodology Applied to Temporal Lobe Epilepsies	✓	✓
Presidential Symposium Seizure Semiology: The Jacksonian March to the Present	✓	✓

Session Name	Live	On-Demand
Advanced Practice Provider Symposium Practical Approaches to Pharmacological Management of Epilepsy	✔	✔
Epilepsy Therapies Symposium New Approaches to Drug Resistant Epilepsy	✔	✔
Investigators Workshop Advances of the Lafora Epilepsy Cure Initiative: A Research Pathway to Treat and Cure Other Epilepsies	✔	✔
Investigators Workshop Metabolic Mechanisms of Epilepsy and Related Neurodevelopmental Disorders	✔	
Investigators Workshop Neuromodulation and Sleep in Epilepsy: Promises and Perils	✔	✔
Investigators Workshop What can We Learn from Large Animal Models of Epilepsy?	✔	✔
Best Practices in Clinical Epilepsy Symposium Access to Care for the Underserved Managing Epilepsy	✔	✔
Neurosurgery Symposium Epilepsy Surgery Controversies: A Case Based Discussion	✔	✔
Investigators Workshop Cellular Contributions to Epileptiform EEG	✔	✔
Investigators Workshop Neurosurgical Treatment of Generalized Epilepsy — Disconnection or Responsive Neuromodulation	✔	
Investigators Workshop Omics and Open Discovery: Challenges and Opportunities for Epilepsy Research	✔	✔
Investigators Workshop Standardizing TMS Language Mapping Protocol in Children: Lessons Learned and Future Directions	✔	✔
Annual Course Epilepsy in the Era of Personalized Medicine	✔	✔
Investigators Workshop Extracting Neural Signals from Noise in Electrophysiological Data: Tools and Traps	✔	✔
Investigators Workshop Focused Ultrasound: A Rapidly Growing, New Approach to Epilepsy Treatment	✔	✔
Investigators Workshop Non-Seizure Outcomes in Developmental and Epileptic Encephalopathies	✔	
Investigators Workshop The Neurocircuitry of Sudden Unexpected Death in Epilepsy: Insights from CURE Epilepsy-funded Research	✔	✔
Investigators Workshop Inhibitory Plasticity, Ictogenesis, and Epileptogenesis	✔	✔
Investigators Workshop Integration of Brain Network Analysis into the Epilepsy Surgery Clinical Pipeline	✔	✔
Investigators Workshop Microglia in Seizures, Epilepsy, and Comorbidity: Recent Advances Illuminating Pathogenic Mechanisms	✔	✔
Investigators Workshop Riding the Wave: Current and Future Contributions of Zebrafish Models to Epilepsy Research	✔	
Special Lecture IOM-NAM 10th Anniversary: Looking Back, Moving Forward: Next Steps on Epilepsy across the Spectrum	✔	✔
Susan Spencer Symposium Patient-centered Research: Over a Decade of Impact on Practice	✔	✔
Investigators Workshop Advanced Gene and Cell Based Therapies to Target General Mechanisms of Epilepsy	✔	✔
Investigators Workshop Diverse Roles of Interneuron Subtypes in Acquired Epilepsies	✔	✔
Investigators Workshop Iatrogenic Epilepsy and Encephalopathy in Immune Therapies for Cancer	✔	
Investigators Workshop Interaction between Physiological and Pathological Oscillations in Memory	✔	✔
SIG Engineering and Neurostimulation: Understanding and Modulating Networks with Multimodal Data and Stimulation	✔	✔
SIG Epidemiology: Beyond Prediction — Can Big Data and Advanced Analytics Catalyze Breakthroughs in Epidemiology?	✔	
SIG Ictal Semiology: Generators of Seizure Semiology — Localization and Propagation Patterns	✔	✔
SIG Neuropharmacology: Anti-seizure Medication (ASM) Withdrawal — Who, What, and When?	✔	
SIG Practice Management: Navigating Specialized Services in an Epilepsy Program	✔	✔
SIG Status Epilepticus: Focal Status Epilepticus — Therapeutic Approach and Response to Therapy	✔	✔
SIG Women's Issues in Epilepsy: Aging, Menopause, and Bone Health in Women with Epilepsy	✔	✔
SIG Epilepsy Education: Diversity, Equity, and Inclusion in Epilepsy Education	✔	✔
SIG Epilepsy Surgery: Neuromodulation — Techniques, Challenges, and Opportunities	✔	
SIG Intractable Generalized Epilepsy: Prognosis, Therapies, and Deep Brain Stimulation	✔	✔
SIG Neuropsychology: Big Data in Cognition in Epilepsy — Clinical and Research Utility	✔	
SIG Quality and Safety: Algorithms for Optimizing Epilepsy Surgery — The Present and the Future	✔	
SIG Seizures in Autoimmune Encephalitis: Focus on Diagnosis and Treatment Trials	✔	✔
SIG Translational Research: Commercializing Academic Research — An Industry Perspective	✔	✔

AES 2022 Digital Select



Recorded Sessions		
Session Name	Live	On-Demand
Merritt-Putnam Symposium Recent Insights into Epileptic Networks and Clinical Implications	✓	✓
SIG Dietary Therapies for Epilepsy: Sex-specific Hormonal and Reproductive Considerations	✓	
SIG Health Disparities: Moving Beyond Talk and into Action	✓	✓
SIG Neuroendocrinology: Females and Cycling Hormones in Epilepsy — Misconceptions, Methods, Mechanisms	✓	
SIG Psychosocial Comorbidities: Autism and Epilepsy — From Theory to Practice	✓	
SIG Seizures and Cerebrovascular Disease: Seizures after Stroke — Location, Reperfusion, Risk Stratification, and Biomarkers	✓	
SIG Temporal Lobe Club: Novel Surgical Therapies	✓	✓
Special Lecture AES-NAEC Joint Coding Session: Coding and Reimbursement Policies of Interest to Epileptologists and Epilepsy Centers	✓	✓
Special Lecture ILAE-WHO Session: Moving Forward in Epilepsy Care – Implementation of the Intersectoral Global Action Plan for Epilepsy and Other Neurological Disorders	✓	✓
Special Lecture Sleep and Epilepsy across the Lifespan	✓	✓
Special Lecture Lombroso Lecture: The Quest to Unveil Hidden Focal Cortical Dysplasia on MRI	✓	✓
Special Lecture Dialogues to Transform Epilepsy: Leveraging Cutting-edge Neuroscience to Improve Epilepsy Therapy	✓	✓
Pediatric State of the Art Symposium Addressing Knowledge Gaps in Early Life Epilepsy	✓	✓
SIG Neonatal Seizures: Update on Treatment of Neonatal Seizures	✓	✓
SIG Professional Wellness in Epilepsy Care: Clinician Burnout — Causes, Consequences, and Cures	✓	
SIG SUDEP: Sudden Unexpected Death in Epilepsy (SUDEP) through the Lens of Non-traditional Semiologies, Genes, and Models	✓	
SIG Tuberous Sclerosis: Tuberous Sclerosis Complex (TSC) Classification — Clinical, Physiologic, Genetic, Imaging Prognostic Features	✓	✓
SIG Tumor-related Epilepsy (TRE): Establishing Standards of Care in Medical Management	✓	
SIG Basic Mechanisms and Neuroscience of Epilepsy: Paradoxical Mechanisms of Hyperexcitability in Epileptic Circuits	✓	✓
SIG EEG: What is an Epileptiform Discharge?	✓	
SIG Epilepsy and Aging: Pharmacotherapy Challenges in Managing Older Adults and Elderly with Epilepsy	✓	✓
SIG Pediatric Epilepsy Case Discussions: Complex and Intractable Infantile Onset Epilepsy – A Medical and a Surgical Case	✓	
SIG Psychogenic Non-Epileptic Seizures (PNES): Update on Neuroimaging of PNES and Other Functional Neurological Disorders (FNDs)	✓	✓
Hot Topics Symposium Post-traumatic Epilepsy	✓	✓
Scientific Symposium The Many Facets of Neurodegeneration in Epilepsy	✓	✓
Clinical Skills Workshop Genetics Testing in Epilepsy Patients	✓	
Clinical Skills Workshop Intracranial Electrode Studies	✓	
Clinical Skills Workshop Misadventures in EEG	✓	
Clinical Skills Workshop Neuroimaging Case Review: Conventional and Computer-assisted Analysis	✓	
Clinical Skills Workshop Neurostimulation in Epilepsy	✓	
Clinical Skills Workshop Pearls of Video EEG	✓	



Special Interest Groups

Consult daily schedule for program details. Preregistration is not required so attendance numbers cannot be accurately predicted in advance. Arrive early to ensure a seat. Due to safety and fire regulations, doors will be closed to any room that fills to capacity.

SIG | Basic Mechanisms and Neuroscience of Epilepsy Paradoxical Mechanisms of Hyperexcitability in Epileptic Circuits

Tuesday, December 6 | 7:00–8:30 AM
Location: Music City Center, 202 B, Level 2

SIG | Children’s Hour: Pushing Boundaries: Epilepsy Surgery in Infants and Young Children

Saturday, December 3 | 7:00–8:30 AM
Location: Music City Center, 106 B, Level 1

 CME & CE

SIG | Clinical Epilepsy for the Advanced Practice Provider: Subspecialty Clinics–Leveraging APPS to Improve Access

Friday, December 2 | 1:30–3:00 PM
Location: Music City Center, 106 B, Level 1

 CME & CE

SIG | Cognitive and Behavioral Treatment for Epilepsy: Disparities in Cognitive Behavioral Therapy

Friday, December 2 | 6:00–7:30 PM
Location: Music City Center, 204, Level 2

 CME & CE

SIG | Critical Care Epilepsy: Status Epilepticus Management – Beyond Anti-seizure Medications and Anesthetics

Friday, December 2 | 6:00–7:30 PM
Location: Music City Center, 105 A, Level 1

 CME & CE

SIG | Data Science in Epilepsy: Open Data Ecosystems–Language, Tools, and Pipelines for Open Science in Epilepsy

Saturday, December 3 | 7:00–8:30 AM
Location: Music City Center, 204, Level 2

 CME

SIG | Developmental and Epileptic Encephalopathies (DEE): Developmental and Epileptic Encephalopathy – From Diagnostic to Treatment Odyssey

Friday, December 2 | 1:30–3:00 PM
Location: Music City Center, 204, Level 2

 CME & CE

SIG | Dietary Therapies for Epilepsy: Sex-specific Hormonal and Reproductive Considerations

Monday, December 5 | 9:00–10:30 AM
Location: Music City Center, 104 A, Level 1

SIG | EEG: What is an Epileptiform Discharge?

Tuesday, December 6 | 7:00–8:30 AM
Location: Music City Center, 204, Level 2

 CME

SIG | Engineering and Neurostimulation: Understanding and Modulating Networks with Multimodal Data and Stimulation

Sunday, December 4 | 6:00–7:30 PM
Location: Music City Center, 105 A, Level 1

SIG | Epidemiology: Beyond Prediction–Can Big Data and Advanced Analytics Catalyze Breakthroughs in Epidemiology?

Sunday, December 4 | 6:00–7:30 PM
Location: Music City Center, 104 A, Level 1

SIG | Epilepsy and Aging: Pharmacotherapy Challenges in Managing Older Adults and Elderly with Epilepsy

Tuesday, December 6 | 7:00–8:30 AM
Location: Music City Center, 105 A, Level 1

 CME & CE

SIG | Epilepsy Education: Diversity, Equity, and Inclusion in Epilepsy Education

Sunday, December 5 | 7:00–8:30 AM
Location: Music City Center, 202 B, Level 2

SIG | Epilepsy Surgery: Neuromodulation – Techniques, Challenges, and Opportunities

Monday, December 5 | 7:00–8:30 AM
Location: Music City Center, 102 A, Level 1

 CME & CE

SIG | Genetics: Prophecy or Empiricy? Clinical Value of Predicting Versus Determining Genetic Variant Dysfunction

Saturday, December 3 | 7:00–8:30 AM
Location: Music City Center, 105 A, Level 1

 CME & CE

SIG | Global Health: Optimizing Epilepsy Care in Areas in Need–Training and Program Building

Friday, December 2 | 1:30–3:00 PM
Location: Music City Center, 208 A, Level 2

 CME & CE

Special Interest Groups

SIG | Health Disparities: Moving Beyond Talk and into Action

Monday, December 5 | 9:00–10:30 AM

Location: Music City Center, 202 B, Level 2

SIG | Ictal Semiology: Generators of Seizure Semiology–Localization and Propagation Patterns

Sunday, December 4 | 6:00–7:30 PM

Location: Music City Center, Karl F. Dean Ballroom A1, Level 4

 CME & CE

SIG | Intractable Generalized Epilepsy: Prognosis, Therapies, and Deep Brain Stimulation

Monday, December 5 | 7:00–8:30 AM

Location: Music City Center, 105 A, Level 1

SIG | Magnetoencephalography (MEG): From Spikes to Seizures to Networks–Magnetoencephalography in Focal Epilepsy

Friday, December 2 | 6:00–7:30 PM

Location: Music City Center, 208 A, Level 2

 CME & CE

SIG | Neonatal Seizures: Update on Treatment of Neonatal Seizures

Monday, December 5 | 6:00–7:30 PM

Location: Music City Center, 105 A, Level 1

SIG | Neuroendocrinology: Females and Cycling Hormones in Epilepsy–Misconceptions, Methods, Mechanisms

Monday, December 5 | 9:00–10:30 AM

Location: Music City Center, 102 A, Level 1

SIG | Neuroimaging: Imaging of Cognitive Reorganization in Epilepsy

Saturday, December 3 | 7:00–8:30 AM

Location: Music City Center, 104 A, Level 1

 CME

SIG | Neuropharmacology: Anti-Seizure Medication (ASM) Withdrawal–Who, What, and When?

Saturday, December 4 | 6:00–7:30 PM

Location: Music City Center, 102 A, Level 1

SIG | Neuropsychology: Big Data in Cognition in Epilepsy–Clinical and Research Utility

Monday, December 5 | 7:00–8:30 AM

Location: Music City Center, 205 B, Level 2

 CME & CE

SIG | Pediatric Epilepsy Case Discussions: Complex and Intractable Infantile Onset Epilepsy–A Medical and a Surgical Case

Tuesday, December 6 | 7:00–8:30 AM

Location: Music City Center, 102 A, Level 1

 CME & CE

SIG | Practice Management: Navigating Specialized Services in an Epilepsy Program

Sunday, December 4 | 6:00–7:30 PM

Location: Music City Center, 202 B, Level 2

SIG | Pregnancy Outcomes: Neurocognitive Outcomes in Adolescents, Fertility, Depression, and Folic Acid Use

Saturday, December 3 | 7:00–8:30 AM

Location: Music City Center, 202 B, Level 2

 CME & CE

SIG | Professional Wellness in Epilepsy Care: Clinician Burnout–Causes, Consequences, and Cures


Monday, December 5 | 6:00–7:30 PM

Location: Music City Center, 204, Level 2

SIG | Psychogenic Non-Epileptic Seizures (PNES): Update on Neuroimaging of PNES and Other Functional Neurological Disorders (FNDs)

Tuesday, December 6 | 7:00–8:30 AM

Location: Music City Center, 106 B, Level 1

 CME & CE

SIG | Psychosocial Comorbidities: Autism and Epilepsy: From Theory to Practice

Monday, December 5 | 9:00–10:30 AM

Location: Music City Center, 209 B, Level 2

 CME & CE

SIG | Quality and Safety: Algorithms for Optimizing Epilepsy Surgery–The Present and the Future

Monday, December 5 | 7:00–8:30 AM

Location: Music City Center, 104 A, Level 1

SIG | Seizure and Cerebrovascular Disease: Seizures After Stroke–Location, Reperfusion, Risk Stratification, and Biomarkers

Monday, December 5 | 9:00–10:30 AM

Location: Music City Center, 205 B, Level 2

 CME & CE

Special Interest Groups

SIG | Seizures in Autoimmune Encephalitis: Focus on Diagnosis and Treatment Trials

Monday, December 5 | 7:00–8:30 AM

Location: Music City Center, 104 C, Level 1

 **CME & CE**

SIG | Status Epilepticus: Focal Status Epilepticus–Therapeutic Approach and Response to Therapy

Sunday, December 4 | 6:00–7:30 PM

Location: Music City Center, 106 B, Level 1

SIG | Stereoelectroencephalography (sEEG): sEEG Methodology Applied to Temporal Lobe Epilepsies

Saturday, December 3 | 7:00–8:30 AM

Location: Music City Center, Karl F. Dean Ballroom A1, Level 4

 **CME & CE**

SIG | SUDEP: Sudden Unexpected Death in Epilepsy (SUDEP) Through the Lens of Non-traditional Semilogies, Genes, and Models

Monday, December 5 | 6:00–7:30 PM

Location: Music City Center, 205 B, Level 2

SIG | Temporal Lobe Club: Novel Surgical Therapies

Monday, December 5 | 9:00–10:30 AM

Location: Music City Center, 104 C, Level 1

 **CME & CE**

SIG | Translational Research: Commercializing Academic Research–An Industry Perspective

Monday, December 5 | 7:00–8:30 AM

Location: Music City Center, 106 B, Level 1

SIG | Tuberos Sclerosis: Tuberos Sclerosis Complex (TSC) Classification–Clinical, Physiologic, Genetic, Imaging Prognostic Features

Monday, December 5 | 6:00–7:30 PM

Location: Music City Center, 202 B, Level 2

 **CME & CE**

SIG | Tumor-Related Epilepsy (TRE): Establishing Standards of Care in Medical Management

Monday, December 5 | 6:00–7:30 PM

Location: Music City Center, 102 A, Level 1

 **CME & CE**

SIG | Women’s Issues in Epilepsy: Aging, Menopause, and Bone Health in Women with Epilepsy

Sunday, December 4 | 6:00–7:30 PM

Location: Music City Center, 104 C, Level 1

 **CME & CE**

AES RESEARCH FUNDS

AES has established several named funds targeting specific research and programmatic needs in epilepsy research, including these opportunities:

- Sergievsky Research Fund for Epilepsy Health Equity and Diversity
- Lennox and Lombroso Trust for Research and Training
- Susan S. Spencer Clinical Research Training Fellowship in Epilepsy
- Jack M. Pellock Pediatric Travel Fund
- Suzanne and Peter Berry International Travel Award
- Fritz Dreifuss Epilepsy Fund
- Rebecca Goldberg-Kaufman Ethical Neuropsychiatry Award Fund
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- Junior Mexican Epileptologists Travel Award Fund



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List is current as of October 12, 2022. See Supporter signs at the AES 2022 Annual Meeting or check AES 2022 Digital Select for updated recognition levels.

12:00 – 1:30 PM

Basic Science Poster Highlights | Poster Session and Lunch

Location: Music City Center, Room 101 C, Level 1

Moderator: Christopher Dulla, PhD

Overview

This session features the most exciting and innovative studies focused on understanding the basic mechanisms of epilepsy and using cutting edge approaches to understand and treat the mechanisms of epilepsy.

Note: Number below refers to poster hall assignment

Program

- 1.014** Delineating Cortical and Hippocampal Neural Network Dysfunction in DEE-13 with Human Brain Organoids | Ranmal Samarasinghe, MD, PhD
- 1.016** Modeling STXBP1 Loss of Function Using Human Pluripotent Stem Cell Derived 2D and 3D Models | Kyle Stokes, PhD
- 1.019** Myelin Plasticity Promotes Thalamocortical Hypersynchrony in Generalized Epilepsy | Juliet Knowles, MD, PhD
- 1.025** Hippocampal Seizures Strongly Modulate the Activity of Locus Coeruleus Neurons | Lars Larsen, PhD
- 1.038** Multi-regional Oscillation and Spiking Synchronization Coordinates Absence Seizure Generation | Jacob Hull, PhD
- 1.047** Brain-wide Reconstruction of Inhibitory Circuits after Traumatic Brain Injury | Alexa Tierno, MS
- 1.048** Optimizing Novel Chemogenetic Tools to Control Focal Seizures | Peter Klein, PhD
- 1.051** Identification and Manipulation of Neuronal Ensembles Active during Seizures | Quynh Anh Nguyen, PhD
- 1.057** Differential Kindling-induced Mortality and Serotonin Pathway Protein Expression in Alzheimer's Disease-associated Mouse Models | Aaron del Pozo, PhD
- 1.064** Abnormal Cell Segregation and Cortical Lamination in Human Cortical Organoid Models of PCDH19 Clustering Epilepsy | Wei Niu, PhD
- 1.072** Simultaneous Imaging of GABAergic and Glutamatergic Cell Activity Reveals Spatiotemporal Dynamics of Generalized Seizures in a Rodent Model | Matthew Stern
- 1.136** Phenotypic Reversal in Succinic Semialdehyde Dehydrogenase Deficiency (SSADHD) via Gene Restoration | Henry Lee, PhD
- 1.140** Neuron-specific AAV-mediated WWOX Gene Therapy Rescues Mortality and Seizure Phenotypes in a WOREE Syndrome Mouse Model | Rami Aqeilan, PhD
- 1.251** Does Bilingualism Modulate Structural Network Efficiency in Temporal Lobe Epilepsy? | Alena Stasenko, PhD
- 1.252** Neuroimaging Abnormalities in Idiopathic Generalized Epilepsy Map to a Common Brain Network Related to Myelination | Frederic Schaper, MD, PhD
- 1.382** Comparison of Single-Nuclei 5' versus 3'-RNA-seq Approaches: Utility for Somatic Variant Detection | Sydney Townsend
- 3.010** The Role of DNA Hydroxymethylation in an Experimental Model of Temporal Lobe Epilepsy | Rudhab Bahabry, MD, MS
- 3.027** Pathological and Physiological High-frequency Oscillations on Whole-Brain Noninvasive Recordings: Comparing Healthy Children and Patients with Epilepsy | Lorenzo Fabbri
- 3.037** Role of Distinct Medial Mammillary Pathways in Temporal Lobe Epilepsy | Mahad Ahmed
- 3.040** 1400W, an iNOS Inhibitor, Suppresses Soman-induced and Epilepsy-associated Brain Pathology: Structural and Functional Magnetic Resonance Imaging Studies | Marson Putra, MD, PhD
- 3.041** In vivo Glycolytic Inhibition following Traumatic Brain Injury Induces Glutamate Catabolism and Attenuates Injury-induced Rise in Glutamate Levels | Sadi Quinones
- 3.045** Pre-treatment with SSRIs and 5-HT2 Agonists have Distinct Temporal and Sleep State-dependent Effects on Post-ictal Breathing in Amygdala Kindled Mice | Katelyn Joyal
- 3.050** STK-001 Surrogate Restores the Excitability of Parvalbumin-positive Fast-spiking Interneurons in a Mouse Model of Dravet Syndrome | Luis Lopez-Santiago, PhD
- 3.064** Epilepsy and SUDEP in a Mouse Model of Human SCN1B-linked Developmental and Epileptic Encephalopathy | Chunling Chen, MD
- 3.072** Adult Restoration of Scn1a is Protective against Thermally Evoked Seizures in a Novel Mouse Model of Dravet Syndrome | Christine Cheah, PhD
- 3.074** Sleep Disruption and Patterns of Histopathology in the Mouse Intraamygdala Kainate Model of Medial Temporal Lobe Epilepsy | Lucie Rosenberg
- 3.112** The Genomic Landscape across More than 1000 Surgically Accessible Epileptogenic Human Brain Lesions | Costin Leu, PhD

Special Poster Sessions | Sunday, December 4

- 3.113** Anatomical Brain Atlas for Structure-Function Coupling: Localizing Epileptogenic Networks from rsfMRI and Predicting Surgical Outcome from Seizure Spread | Evan Collins, MS
- 3.120** Functional Connectivity Discriminates Epileptogenic States and Predicts Surgical Outcome in Children with Drug-resistant Epilepsy | Sakar Rijal
- 3.129** Respiratory Chemosponses In Kv1.1 KO Mice: A Preclinical SUDEP Model | Shruthi Iyer, MS
- 3.134** Rabbit Model of Long QT Syndrome Type 2 Exhibits Neuro-Cardiac Electrical Abnormalities and SUDEP | Kyle Wagner
- 3.137** Targeted Therapy Corrects Cellular Dysfunction, Ataxia, and Seizure Susceptibility in a Mouse Model of a Progressive Myoclonus Epilepsy | Huijie Feng, PhD
- 3.146** Slc35a2 Knockout In vivo Results in Altered Cortical Laminar Structure | Soad Elziny
- 3.162** Intrinsic Cortical Structure of Neural Synchrony and Excitability during Transition from Wakefulness to Light Non-Rapid Eye Movement and Implications for Focal Epilepsies | Joline Fan, MD
- 3.187** Beta-Hydroxybutyrate Reduces Neuronal Excitability and Seizures | Supriya Sharma, PhD
- 3.276** Profile of Neuronal Apoptosis after Exposure to Voltage Gated Sodium Channel Blockers: Comparison between Phenytoin, Lacosamide, Zonisamide, and Rufinamide | Eric Witherspoon
- 3.277** Nanoparticle-encapsulated Neuropeptide Y Reduces Seizure Susceptibility in Mice | Samantha Reed
- 3.367** Ultra-low Level Somatic Mutations and Structural Variations Account for Mutation-Negative Focal Cortical Dysplasia (FCD) Type II in Deep Sequencing of Bulky Brain Tissues | Jeong Ho Lee, MD, PhD
- 3.368** Predicting Pathogenicity and Functional Effects of Missense Variants in N-methyl-D-aspartate (NMDA) Receptor Encoding GRIN Genes | Ludovica Montanucci, PhD
- 3.381** An Integrated Machine Learning and Functional Analysis Approach for Resolution of Variants of Uncertain Significance (VUS) in PCDH19 | Gemma Carvill, PhD

5:15–6:15 PM

Broadening Representation Inclusion and Diversity by Growing Equity (BRIDGE)

Location: Music City Center, Room 101 C, Level 1

Moderators: Christopher Dulla, PhD;
and Farah Lubin, PhD

Overview

Please join AES for an hour of learning and networking—plus refreshments!—at this poster session, which spotlights research relating to the needs of the underserved populations, along with showcasing the work of accomplished investigators who identify with under-represented groups. As a leading provider of early career research funding and continuing education for epilepsy professionals, AES plays an instrumental role in growing a diverse epilepsy workforce and encouraging work that will impact disparities in care for the underserved.

Note: Number below refers to poster hall assignment

Program

- 1.002** Canonical Wnt Signaling Modulation in Temporal Lobe Epileptogenesis | Muriel Mardones, PhD
- 1.040** Cannabidiol Reduces Glutamate Release from Cortical Synaptic Terminals Obtained from Epilepsy Surgery of Patients with Drug-resistant Temporal Lobe Epilepsy | Luisa Rocha, PhD
- 1.057** Differential Kindling-induced Mortality and Serotonin Pathway Protein Expression in Alzheimer's Disease-associated Mouse Models | Aaron del Pozo, PhD
- 1.062** Development of a Transgenic Rabbit Model of Dravet Syndrome | Roberto Ramos Mondragon, PhD
- 1.066** Human iPSC Modeling of SLC6A1-related Developmental and Epileptic Encephalopathy | Maria Varela
- 1.124** In vivo Mapping of Tauopathy in Temporal Lobe Epilepsy | Raúl Rodríguez-Cruces, PhD
- 1.131** Mapping Neural Circuits Activated by Spontaneous Seizures in TRAP2 Mice | Edward Perez-Reyes, PhD
- 1.148** Partial Agonist Activation of TrkB-R Prevents Interneuronal Abnormalities following Neocortical Status Epilepticus | Maria Perez, PhD
- 1.153** Ictal Markers are Not Better than Interictal Markers for Localizing the Epileptogenic Zone | Chifaou Abdallah, MD
- 1.182** Activation of Specific Cell Populations of the Pedunculopontine Nucleus Modulates Acute Absence and Brainstem Generalized-induced Seizures | Carolina Campos-Rodriguez, MSc, PhD
- 1.246** Machine Learning for Biomarker Detection and Classification of Functional Seizures Following TBI | Gabriella Taylor
- 1.262** Exploring Changes in Functional Connectivity after a First Unprovoked Seizure: An fMRI Resting State and Movie-driven Study | Elma Paredes Aragon, MD
- 1.273** Characteristics Predictive of Suicidal Ideation in Adolescents with Focal Epilepsy | Monica Ferrer, MD

Special Poster Sessions | Sunday, December 4

- 1.276** Phenytoin Induced Off Target Potassium Channel Blockade and Prolonged Cardiac Repolarization (QTc) in a Rabbit Model of Long QT Syndrome Type 2 | Halleluuah Adebisi, MS
- 1.365** Outcome of a Multidisciplinary Program to Support Children with Autism Admitted for Phase 1 Evaluation: 2nd and 3rd Years | Mary Wojnaroski, PhD
- 1.382** Comparison of Single-nuclei 5' versus 3'-RNA-seq Approaches: Utility for Somatic Variant Detection | Sydney Townsend
- 1.383** Demographic and Geographic Variations in the Pediatric Diagnosis of Staring Spells | Laura Fonseca, MS
- 1.390** The Association of Language Barriers with Gaps and Variations in the Delivery of Outpatient Care in Hispanic Persons with Epilepsy | Rafael Perez Rodriguez, MD
- 1.391** Health Care Experiences among People with Epilepsy in the LGBTQ Community | Ernesto Gonzalez-Giraldo, MD
- 1.396** Barriers and Facilitators to UPLIFT Adoption in Epilepsy Clinics to Support Depressive Symptom Self-management among People with Epilepsy | Susanna O'Kula, MD
- 1.399** A Real-time Dashboard of Patient-reported Determinants of Health Disparities and Adherence to Epilepsy Quality Metrics in a Large Healthcare System | Lidia Moura, MD, PhD, MPH
- 1.408** Disparities in Morbidity and Mortality in Adults with Status Epilepticus in the USA: 2010-2019 | Gabriela Tantillo, MD, MPH
- 2.025** Neurophysiological Associations with Genetic Variations in Prader-Willi Syndrome | Isabel Okinedo
- 2.060** Morphological Interictal Spike Analysis for Seizure Onset Zone Localization | Carlos Aguila
- 2.075** Network Subspace Analysis on SEEG: Tracking Seizure Genesis and Brain Dynamics | Daniel Ehrens, PhD
- 2.155** Social Disparities in Pregnancy Outcomes in Women with Epilepsy | Jasmine Coles
- 2.163** Obstetrical Outcomes in Patients with Epilepsy in a Canadian Tertiary Care Center | Sharon Ng, BSc
- 2.198** Resting State Functional Connectivity in Bilateral Temporal Lobe Epilepsy | Alfredo Lucas, MS
- 2.204** Atypical Emotional Conflict Responses in Adolescents with Epilepsy Using Magnetoencephalography | F. Kathryn King, MS
- 2.254** The Effects of Anti-seizure Medications on Lipid Values in Adults Considering Ketogenic Diet Therapy | Ashley Muller
- 2.346** Temporal Trends in Representation of Minoritized Populations in the Studies Presented at National Epilepsy Meetings | Roohi Katyal, MD
- 2.390** Socioeconomic Status and Healthcare Resource Utilization among Children with Epilepsy in the United States: Results from a Nationally Representative Sample | Nallammai Muthiah
- 2.394** Efficacy of Project UPLIFT among Blacks with Epilepsy | Rakale Quarells, PhD
- 2.403** Read-alongs: Multicultural Epilepsy Disparities Health Literacy Campaigns among Black Youth | Thometta Cozart, MS, MPH, CHES, CPH
- 2.407** Cortical Implication for Enhancement of Breathing | Blanca Talavera de la Esperanza, MD
- 3.002** Neonatal Status Epilepticus Induces Microglial Activation and Complement Signaling Expression in the Hippocampus of C57Bl/6 Mice | Danielle Santana Coelho, PhD
- 3.054** Odorant Exposure Decreases Mortality in a Dravet Syndrome Mouse Model | Martina Hannaalla
- 3.139** Dose-dependent Profiles of Add-on Drugs in a Triple-drug Therapy Protocol in a Mouse Model of Dravet Syndrome | Jeffrey Mensah, MS
- 3.163** Utility of Rapid Response EEG | Abigail Lofchie, MD
- 3.170** Sevo Electrodes Outperform Traditional Electrodes in EEG Quality for Coarse, Curly Hair | Apoorva Mahajan
- 3.189** Acute SSRI Administration Improves Gasping, Autoresuscitation, and Survival in Seizing Rats | Hans Ajieren
- 3.254** Spectral Granger Causality for Ictal Network Study using Magnetoencephalography Data | Natascha Cardoso da Fonseca, MD, PhD
- 3.276** Profile of Neuronal Apoptosis after Exposure to Voltage Gated Sodium Channel Blockers: Comparison between Phenytoin, Lacosamide, Zonisamide, and Rufinamide | Eric Witherspoon
- 3.303** The Effect of the Medilepsy Mobile App on Medication Adherence and Transition Readiness Skills in Adolescents and Young Adults with Epilepsy: A Quasi-Experimental Study. | Michelle Tall, PhD, RN
- 3.339** Disparities Associated with Discontinuation of Ketogenic Diet Therapy: Single Center Experience | Erin Fedak Romanowski, DO
- 3.369** Exploring the Susceptibility to Tardive Dyskinesia in Patients with a KCNQ2-related Disorder | Brandon Oby
- 3.384** Epilepsy Care In Kenya: Gaps and Opportunities from Targeted Survey of Health Workers | Angela Wabulya, MB, ChB
- 3.398** Follow-through: Subspecialty Clinic Response to Underserved Pediatric Epilepsy Patient/Caregiver Needs | Amani Carson
- 3.400** Cerebral Palsy as a Co-morbid Condition among Children with Previously Untreated Epilepsy in Northern Nigeria | Aminu Abdullahi, MBBS, MSc

Special Poster Sessions | Monday, December 5

3:15–5:30 PM

Pediatric Epilepsy Highlights Session

Location: Music City Center, Room 101 C, Level 1

Moderators: Sarah Kelley, MD;
and Zachary Grinspan, MD, FAES

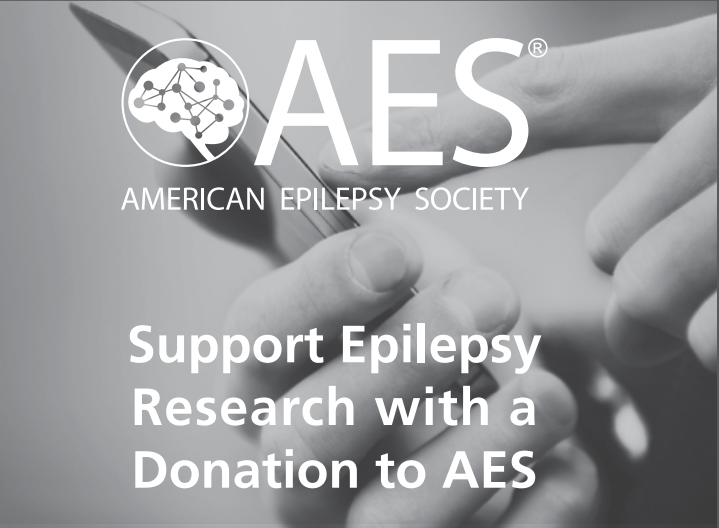
Overview

This session will showcase selected scientific abstracts focused on topics in clinical care and research in pediatric epilepsy. Authors will present an 8-minute overview of their work. Presentations are chosen from all submitted abstracts. Participants will be able to view posters and meet the authors at the end of the program. Numbers shown indicate the poster hall assignment.

Note: This program is not accredited for continuing education credits.

Program

- 1.265** Suicidality in Adolescents with Newly Diagnosed Focal Epilepsy: A Potentially Persistent Comorbidity | Hadley Greenwood
- 1.329** Mapping of Spike Propagation Reveals Effective Connectivity and Predicts Surgical Outcome in Epilepsy | Margherita A.G. Matarrese, MSc
- 1.114** Connectivity Increases during Spikes and Spike-free Periods in Childhood Epilepsy with Centrotemporal Spikes | Fiona Baumer, MD
- 1.206** Asking the Right Questions: Improving Recognition and Treatment of Pediatric Focal Epilepsy in the Emergency Department | Nora Jandhyala
- 1.112** Infant Sleep Spindles Predict Long-term Cerebral Palsy Better than Early Clinical or MRI Findings Alone | Erin Berja
- 1.336** Ictal Source Imaging and Functional Connectivity on Intracranial EEG Localize the Seizure Onset and Predict Surgical Outcome in Pediatric Epilepsy | Lorenzo Ricci, MD
- 1.339** Outcomes of Epilepsy Surgery for Patients with Epileptic Spasms: A Systematic Review and Meta-Analysis | Taylor Kolosky
- 1.231** Prioritizing Hormone Therapy over Vigabatrin as the First Treatment for Infantile Spasms—A Quality Improvement Initiative | John Mytinger, MD
- 1.367** The Gain of Function SCN1A Disorder Spectrum: Novel Epilepsy Phenotypes and Therapeutic Implications | Andreas Brunklaus, MD
- 1.363** Neighborhood Disadvantage Impacts the Trajectory of IQ in Childhood Idiopathic Epilepsies | William Schraegle, PhD



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To join a walking tour, gather at the Poster Information counter located near booth #118 in the poster hall.

Departure Time	Topic	Tour Leader
Poster Session 1: Saturday, December 3 12:15 PM		
12:15 PM	Anti-Seizure Medications	Jacqueline French, MD, FAES
12:25 PM	Clinical Epilepsy	Daniel Friedman, MD, FAES
12:35 PM	Basic Translational Science	Amy Brewster, PhD
12:45 PM	Genetics	Heather Mefford, MD, PhD
12:55 PM	Neuroimaging	Leonardo Bonilha, MD, PhD
1:05 PM	Partners Against Mortality in Epilepsy (PAME)	George Richerson, MD, PhD, FAES; and Elizabeth Donner, MD, MSc, FRCPC, FAES

Departure Time	Topic	Tour Leader
Poster Session 2: Sunday, December 4 12:15 PM		
12:15 PM	Clinical Epilepsy	Alison Pack, MD, MPH, FAES
12:25 PM	Anti-Seizure Medications	Paul Van Ness, MD, FAES
12:35 PM	Neuroimaging	Victoria Morgan, PhD, FAES
12:45 PM	Surgery	Taylor J. Abel, MD; and John Rolston, MD, PhD
12:55 PM	Comorbidities	Madison Berl, PhD

Departure Time	Topic	Tour Leader
Poster Session 3: Monday, December 5 12:15 PM		
12:15 PM	Comorbidities	Heidi Munger Clary, MD, MPH
12:25 PM	Genetics	Gemma Carvill, PhD
12:35 PM	Basic Translational Science	Anne Anderson, MD
12:45 PM	Clinical Epilepsy	Anthony Fine, MD
12:55 PM	Dietary Therapies	Eric Kossoff, MD, FAES

Platform Sessions | Saturday, December 3

Concurrent Platform Sessions

2:15–4:30 PM

There will be three concurrent sessions consisting of selected key scientific abstracts. Authors will present a 10-minute overview of their work followed by a five-minute Q&A session.

	Platform A: Basic Mechanisms Music City Center, Room 202 B, Level 2 Moderators: Sara Eyal, PhD; and Cameron Metcalf, PhD	Platform B: Translational Research Music City Center, Room 205 B, Level 2 Moderators: Lena Nguyen, PhD; and Garnett Smith, MD	Platform C: Neuroimaging Music City Center, Room 103 B, Level 1 Moderators: Taha Gholipour, MD; and Chengyuan Wu, MD, MEng
2:15 PM	A.01 Canonical Wnt Signaling Modulation in Temporal Lobe Epileptogenesis Muriel Mardones, PhD	B.01 Towards the Development of a Wearable Seizure Prediction System Based on Deep Canonical Correlation Analysis Solveig Vieluf, PhD	C.01 Neuroimaging Abnormalities in Idiopathic Generalized Epilepsy Map to a Common Brain Network Related to Myelination Frederic Schaper, MD, PhD
2:30 PM	A.02 Myelin Plasticity Promotes Thalamocortical Hypersynchrony in Generalized Epilepsy Juliet Knowles, MD, PhD	B.02 Rabbit Model of Long QT Syndrome Type 2 Exhibits Neuro-Cardiac Electrical Abnormalities and SUDEP Kyle Wagner	C.02 Frontal, But Not the Same: Cognitive System Reorganization in Frontal Lobe and Juvenile Myoclonic Epilepsy Lorenzo Caciagli, MD, PhD
2:45 PM	A.03 De novo Variants Affecting DNMT1 Exon 10a Cause Severe Developmental and Epileptic Encephalopathy Shridhar Parthasarathy	B.03 Predicting Seizure Clusters Using Ambulatory Intracranial EEG in People with Focal Epilepsy Krishnakant Saboo, MTech	C.03 Distinct Spatial Patterns of Cortical Atrophy and White Matter Compromise Associated with Temporal Lobe Epilepsy Alice Ballerini, PhD
3:00 PM	A.04 Hippocampal Seizures Strongly Modulate the Activity of Locus Coeruleus Neurons Lars Larsen, PhD	B.04 Automatically Detected Spike Ripples Identify the Epileptogenic Zone Better than Ripples, Fast Ripples, or HFOs in a Multicenter Intracranial Dataset Wen Shi, PhD	C.04 Staging and Subtyping Disease Evolution in Temporal Lobe Epilepsy Hyo Lee, MSE
3:15 PM	A.05 Cannabidiol Reduces Glutamate Release from Cortical Synaptic Terminals Obtained from Epilepsy Surgery of Patients with Drug-resistant Temporal Lobe Epilepsy Luisa Rocha, PhD	B.05 Anatomical Brain Atlas for Structure-Function Coupling: Localizing Epileptogenic Networks from rsfMRI and Predicting Surgical Outcome from Seizure Spread Evan Collins, MS	C.05 Structural Disconnection may Mediate Thalamic fMRI Activity Changes after Temporal Lobe Epilepsy Surgery Lucas Sainburg

Platform Sessions | Saturday, December 3

Concurrent Platform Sessions

3:15 – 5:30 PM

There will be three concurrent sessions consisting of selected key scientific abstracts. Authors will present a 10-minute overview of their work followed by a five-minute Q&A session.

	Platform A: Basic Mechanisms Music City Center, Room 205 B, Level 2 Moderators: Sara Eyal, PhD; and Cameron Metcalf, PhD	Platform B: Translational Research Music City Center, Room 205 B, Level 2 Moderators: Lena Nguyen, PhD; and Garnett Smith, MD	Platform C: Neuroimaging Music City Center, Room 103 B, Level 1 Moderators: Taha Gholipour, MD; and Chengyuan Wu, MD, MEng
3:30 PM	A.06 Optimizing Novel Chemogenetic Tools to Control Focal Seizures Peter Klein, PhD	B.06 Phenotypic Reversal in Succinic Semialdehyde Dehydrogenase Deficiency (SSADHD) via Gene Restoration Henry Lee, PhD	C.06 Long-term Seizure Freedom in Frontal Lobe Epilepsy is Associated with Anterior Thalamo-Cortical Disconnection Davide Giampiccolo, MD
3:45 PM	A.07 Lactate Inhibits Seizures via Lactate Receptor, HCA1R Daria Skwarzynska, MSc	B.07 Controlling Seizure Activity Rescues Blood Brain Barrier Dysfunction in Temporal Lobe Epilepsy Claire Behan, ANP, PhD	C.07 Combined Automated Hippocampal Segmentation and Focus Lateralization in Temporal Lobe Epilepsy Ravnor Gill, MSc
4:00 PM	A.08 Development of a Transgenic Rabbit Model of Dravet Syndrome Roberto Ramos Mondragon, PhD	B.08 The Effect of Anti-seizure Medications and Cardioprotective Drugs on Cardiac Remodeling in a Post-status Epilepticus Rat Model of Temporal Lobe Epilepsy Zining Liu	C.08 Clinical MRI Morphological Analysis of Functional Seizures Compared to Seizure-naïve and Psychiatric Controls Wesley Kerr, MD, PhD
4:15 PM	A.09 Sensory Processing Deficits in a Mouse Genetic Model of Epileptic Encephalopathies (EE) Qian-Quan Sun, PhD	B.09 Nootropic Effects of MitoQ, a Mitochondria-targeted Antioxidant, in a Mouse Model of TLE Segewkal Hawaze Heruye, B Pharm, MS	C.09 Exploring Changes in Functional Connectivity after a First Unprovoked Seizure: An fMRI Resting State and Movie-driven Study Elma Paredes Aragon, MD

Platform Sessions | Monday, December 5

Concurrent Platform Sessions

3:15–5:30 PM

There will be three concurrent sessions consisting of selected key scientific abstracts. Authors will present a 10-minute overview of their work followed by a five-minute Q&A session.

	Platform D: Neurophysiology Music City Center, Room 202 B, Level 2 Moderators: Jane Allendorfer, PhD; and Jonathan Kleen, PhD	Platform E: Clinical Epilepsy Music City Center, Room 103 B, Level 1 Moderators: Stephane Auvén, MD, PhD; and Lisa Garrity, PharmD	Platform F: Genetics and Behavior / Neuropsychology / Language Music City Center, Room 205 B, Level 2 Moderators: Robyn Busch, PhD; and Tristan Sands, MD, PhD
3:15 PM	D.01 Refractory Acute Symptomatic Seizures in Critically Ill Adults from a Multicenter Cohort Study Zachary McKee, MD	E.01 Creativity at Age 4.5 Years in Children of Mothers with Epilepsy vs. Children of Healthy Mothers in the MONEAD Study Kimford J. Meador, MD	F.01 Seizures in Dementia are Associated with Worse Clinical Outcomes, Higher Mortality Rates and Shorter Lifespans Ifrah Zavar, MD
3:30 PM	D.02 Time Elapsed between Admission and Initiation of Electroencephalography is Independently Associated with Poor Outcomes in Critically Ill Adults Muhammad Adnan Haider, MD	E.02 Prenatal Exposure to Antiseizure Medication and Birth Weight Outcomes Jakob Christensen, MD, PhD, DrMedSci	F.02 Behavioral Phenotypes in Temporal Lobe Epilepsy and Their Clinical and Network Features Aaron Struck, MD
3:45 PM	D.03 Prospective Incidence of Cardiac Arrhythmias (CA) in the Peri-ictal Period of Generalized Convulsive Seizures (GCS) Laura Vilella Bertran, MD	E.03 Cognitive Outcomes at 2 Years Old in Children of Women with Epilepsy are Associated with Fetal Alcohol Syndrome Risk Genes: MONEAD Study Yi Li, MD, PhD	F.03 Decoding Features of Real-World Navigation from Neural Data via RNS Kathryn Graves, BA, MS, MPhil
4:00 PM	D.04 An Automated Algorithm for MEG Language Mapping Using Equivalent Current Dipole and Comparison with Other Methods Abbas Babajani-Feremi, PhD	E.04 PERPRISE Study (PERampanel in Patients with Primary or Secondarily Generalized Seizures): First Interim Analysis Bernhard J. Steinhoff, MD	F.04 The Molecular Diagnostic Landscape of Children with Seizure Onset in the First Three Years of Life Heather McLaughlin, PhD, FACMG
4:15 PM	D.05 Intrinsic Cortical Structure of Neural Synchrony and Excitability during Transition from Wakefulness to Light Non-Rapid Eye Movement and Implications for Focal Epilepsies Joline Fan, MD	E.05 Do Rates of Status Epilepticus and SUDEP Vary between Different Genetic Developmental and Epileptic Encephalopathies? Sophie Russ-Hall, BSc (Hons)	F.05 Ultra-low Level Somatic Mutations and Structural Variations Account for Mutation-Negative Focal Cortical Dysplasia (FCD) Type II in Deep Sequencing of Bulky Brain Tissues Jeong Ho Lee, MD, PhD

Platform Sessions | Monday, December 5

Concurrent Platform Sessions

3:15 – 5:30 PM

There will be three concurrent sessions consisting of selected key scientific abstracts. Authors will present a 10-minute overview of their work followed by a five-minute Q&A session.

	Platform D: Neurophysiology Music City Center, Room 202 B, Level 2 Moderators: Jane Allendorfer, PhD; and Jonathan Kleen, PhD	Platform E: Clinical Epilepsy Music City Center, Room 103 B, Level 1 Moderators: Stephane Auvén, MD, PhD; and Lisa Garrity, PharmD	Platform F: Genetics and Behavior / Neuropsychology / Language Music City Center, Room 205 B, Level 2 Moderators: Robyn Busch, PhD; and Tristan Sands, MD, PhD
4:30 PM	D.06 Additive Benefit of Neuroimaging and Electroencephalography in Predicting Post-Ischemic-Stroke Epilepsy Valdey Moura Junior, MS, MBA	E.06 Targeting Sleep to Improve Cognitive Outcomes in Temporal Lobe Epilepsy – a Double-blind Randomized Controlled Study Garima Shukla, MBBS, MD, DM, FRCPC	F.06 A Conserved Variant Pathogenicity and Genotype Phenotype Pattern across SCN1A, SCN2A, SCN3A and SCN8A Disorders Tobias Bruenger, MS
4:45 PM	D.07 A Cloud-based Platform for Collaborative Research with Massive Neurophysiology Data: The Brain Data Science Platform (BDSP) Yilun Chen, MS	E.07 Implementation of a Childhood Status Epilepticus Protocol with Point-of-Care EEG-Video in Three Major Pediatric Emergency Units in Kano, Nigeria Umar Sabo, MBBS, MPH	F.07 Comparison of Single-Nuclei 5' versus 3'-RNA-seq Approaches: Utility for Somatic Variant Detection Sydney Townsend
5:00 PM	D.08 Thalamocortical Evoked Potentials Inform Short-term Thalamic DBS Nicholas Gregg, MD	E.08 Resting State Functional MRI Association with Consciousness, Mortality, and Long-term Seizure and Developmental Outcomes in Neonatal Acute Brain Injury Varina Boerwinkle, MD	F.08 Behavior, Social-Emotional, and Sleep Difficulties in Young Children with SCN1A+ Dravet Syndrome Participating in the ENVISION Study, an International, Prospective Natural History Ingrid Scheffer, AO, FAA, FAHMS
5:15 PM	D.09 Seizures from Optical Activation of CA1 Glutamatergic Neurons Revealed Discrete Phases of Ictogenesis Spencer Chen, PhD	E.09 Epilepsy Diagnosis and Management in Children with Autism Spectrum Disorders: A Single Center Retrospective Cohort Study Karen Lob	F.09 Psychopathological Outcome after Epilepsy Surgery in Children: A Prospective Controlled Study Carmen Barba, MD, PhD

AES 2022 Sessions on Diversity, Equity, and Inclusion-Related Topics

The AES Council on Education recommends the education sessions below for attendees wanting to learn more about how to address disparities in healthcare for people with epilepsy, social determinants of health that impact outcomes, and growing a diverse epilepsy professional community.

FRIDAY, DECEMBER 2

10:00 AM

Professional Development | Career Pathways: Interprofessional Panel

12:30 PM

Annual Fundamentals Symposium | Beyond Seizure Treatment: Tapping into the Community for Care

1:30 PM

SIG | Global Health: Optimizing Epilepsy Care in Areas in Need — Training and Program Building

5:00 PM

Basic Science Skills Workshop | Addressing Sex as a Biological Variable in Epilepsy and Beyond

6:00 PM

SIG | Cognitive and Behavioral Treatment for Epilepsy: Disparities in Cognitive Behavioral Therapy

SATURDAY, DECEMBER 3

7:00 AM

SIG | Neuroimaging: Imaging of Cognitive Reorganization in Epilepsy

5:30 PM

Best Practices in Clinical Epilepsy Symposium | Access to Care for the Underserved Managing Epilepsy

SUNDAY, DECEMBER 4

8:45 AM

Annual Course | Epilepsy in the Era of Personalized Medicine

2:00 PM

Special Lecture | IOM-NAM 10th Anniversary: Looking Back, Moving Forward — Next Steps on Epilepsy Across the Spectrum

5:15 PM

Poster Session | Broadening Representation Inclusion and Diversity by Growing Equity (BRIDGE)

6:00 PM

SIG | Practice Management: Navigating Specialized Services in an Epilepsy Program

MONDAY, DECEMBER 5

7:00 AM

SIG | Epilepsy Education: Diversity, Equity, and Inclusion in Epilepsy Education

9:00 AM

Special Lecture | ILAE-IBE Session: Moving Forward in Epilepsy Care — Implementation of the Intersectoral Global Action Plan for Epilepsy and Other Neurological Disorders

SIG | Health Disparities: Moving Beyond Talk and into Actions

SIG | Dietary Therapies for Epilepsy: Sex-specific Hormonal and Reproductive Considerations

SIG | Neuroendocrinology: Females and Cycling Hormones in Epilepsy — Misconceptions, Methods, Mechanisms

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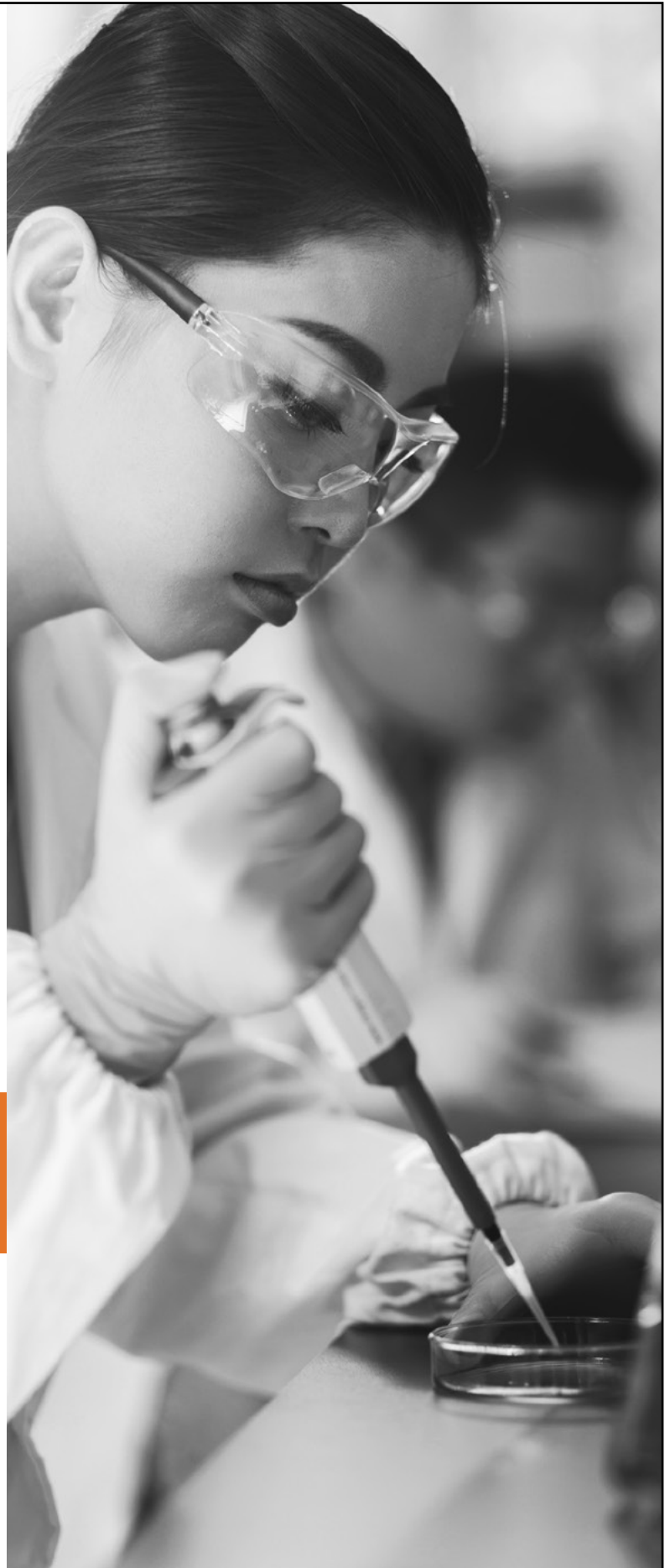
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Poster Schedules

Poster Schedules

Numbers shown indicate the poster hall board assignment. Refer to aesnet.org/abstracts for details.

	Saturday, December 3 Poster Session 1: 12:00 – 6:00 PM, Music City Center Hall B, Level 3	Sunday, December 4 Poster Session 2: 10:00 AM – 4:00 PM Music City Center Hall B, Level 3	Monday, December 5 Poster Session 3: 8:00 AM – 2:00 PM, Music City Center Hall B, Level 3 Continental breakfast available
Basic Mechanisms	1.001 – 1.080		3.001 – 3.084
Translational Research	1.081 – 1.148		3.085 – 3.150
Neurophysiology	1.149 – 1.204	2.001 – 2.086	3.151 – 3.204
Clinical Epilepsy	1.205 – 1.237	2.087 – 2.168	3.205 – 3.240
Neuroimaging	1.238 – 1.264	2.169 – 2.200	3.241 – 3.267
Comorbidities (Somatic and Psychiatric)	1.265 – 1.274	2.201 – 2.210	3.268 – 3.275
Anti-seizure Medications	1.275 – 1.316	2.211 – 2.270	3.276 – 3.312
Non-ASM / Non-Surgical Treatments		2.271 – 2.273	
Surgery	1.317 – 1.348	2.274 – 2.302	3.313 – 3.338
Dietary Therapies			3.339 – 3.349
Behavior / Neuropsychology / Language	1.349 – 1.365	2.303 – 2.321	3.350 – 3.366
Genetics	1.366 – 1.382	2.322 – 2.339	3.367 – 3.382
Health Services	1.383 – 1.402	2.340 – 2.360	3.383 – 3.402
Neuropathology of Epilepsy		2.361 – 2.365	
Practice Resources		2.366 – 2.376	
Epidemiology	1.403 – 1.410	2.377 – 2.385	3.403 – 3.410
Public Health		2.386 – 2.403	
Case Studies		2.404 – 2.411	
Late Breaking	1.411 – 1.478	2.412 – 2.478	3.411 – 3.477

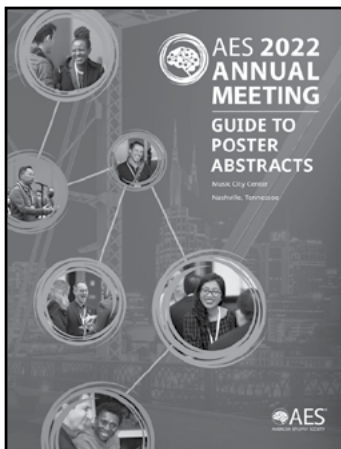
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POSTER SESSIONS

Session 1: Saturday, December 3
12:00 – 6:00 PM

Session 2: Sunday, December 4
10:00 AM – 4:00 PM

Session 3: Monday, December 5
8:00 AM – 2:00 PM

Music City Center, Hall B, Level 3

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Schedule at-a-Glance

THURSDAY, DECEMBER 1

5:00 – 7:00 PM

Registration Open | Badge Pick-up

Music City Center
Hall A1, Level 3

FRIDAY, DECEMBER 2

7:00 AM – 6:00 PM

Registration Open | Badge Pick-up

Music City Center
Hall A1, Level 3

7:30 AM – 5:05 PM

AES and ASSFN Resident Epilepsy Surgery Course | Invitation Only

Music City Center

7:30 AM – 5:30 PM

AES Resident EEG Course | Invitation Only

Music City Center

8:30 – 11:30 AM

Epilepsy Specialist Symposium

 CME & CE

Music City Center
Karl F. Dean Ballroom B1, Level 4

8:30 – 9:45 AM

Professional Development | Career Skills | Interdisciplinary Team Building

Music City Center
209 B, Level 2

9:00 AM – 12:00 PM

AES-CNF Symposium

 CME & CE

Music City Center
104 C, Level 1

10:00 – 11:15 AM

Professional Development | Career Pathways | Clinical Care Emphasis Panel

Music City Center
207 B, Level 2

Professional Development | Career Pathways | Interprofessional Panel

Music City Center
208 A, Level 2

Professional Development | Career Pathways | Research Emphasis Panel

Music City Center
209 B, Level 2

11:30 AM – 12:45 PM

Professional Development | Career Skills: Surviving First Year as Faculty / Attending

Music City Center
207 B, Level 2

12:30 – 3:00 PM

Annual Fundamentals Symposium

 CME & CE

Music City Center
Karl F. Dean Ballroom B1, Level 4

12:30 – 3:00 PM

Special Lecture | Epilepsy Research Benchmarks

Music City Center
Karl F. Dean Ballroom A1, Level 4

1:00 – 3:00 PM

Special Lecture | Epilepsy Fellowship Program Directors Meeting

 CME

Music City Center
202 B, Level 2

1:30 – 3:00 PM

SIG | Clinical Epilepsy for the Advanced Practice Provider

 CME & CE

Music City Center
106 B, Level 1

SIG | Developmental and Epileptic Encephalopathies (DEE)

 CME & CE

Music City Center
204, Level 2

SIG | Global Health

 CME & CE

Music City Center
208 A, Level 2

2:30 – 5:00 PM

Spanish Symposium

 CME & CE

Music City Center
105 A, Level 1

4:00 – 5:30 PM

Special Lecture | 20th Judith Hoyer Lecture in Epilepsy

 CME & CE

Music City Center
Karl F. Dean Ballroom B1, Level 4

5:00 – 6:30 PM

Basic Science Skills Workshop | Addressing Sex as a Biological Variable in Epilepsy and Beyond


Music City Center
106 B, Level 1

Basic Science Skills Workshop | Immune Cells

Music City Center
202 B, Level 2

5:30 – 8:00 PM

Special Lecture | Dobbs v. Jackson: Impact on Reproductive Health in Epilepsy

 CME & CE

Music City Center
Karl F. Dean Ballroom A1, Level 4



Schedule at-a-Glance

6:00 – 9:00 PM

Industry Satellite Symposium | Jazz Pharmaceuticals – Moving Beyond Seizures in the Care of Patients with Pediatric-Onset Epileptic Encephalopathies

Music City Center
Davidson Ballroom C, Level 1M

Industry Satellite Symposium | SK Life Science, Inc – Drug Resistant Epilepsy: Mechanisms and Recent Treatment Advances

Music City Center
Davidson Ballroom B, Level 1M

Industry Satellite Symposium | UCB, Inc. – Exploring Health Disparities, Inequities, and Barriers to Care for Black Patients Living With Epilepsy

Music City Center
Davidson Ballroom A, Level 1M

6:00 – 7:30 PM

SIG | Cognitive and Behavioral Treatment for Epilepsy



CME & CE

Music City Center
204, Level 2

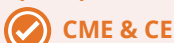
SIG | Critical Care Epilepsy



CME & CE

Music City Center
105 A, Level 1

SIG | Magnetoencephalography (MEG)



CME & CE

Music City Center
208 A, Level 2

SATURDAY, DECEMBER 3

6:30 AM – 5:00 PM

Registration Open | Badge Pick-up

Music City Center
Hall A1, Level 3

7:00 – 8:30 AM

Professional Development | Career Skills | How to Apply for Early Career Grants

Music City Center
104 C, Level 1

7:00 AM – 4:15 PM

AES Resident EEG Course | Invitation Only

Music City Center

7:00 – 8:30 AM

SIG | Children's Hour



CME & CE

Music City Center
106 B, Level 1

SIG | Data Science in Epilepsy



CME

Music City Center
204, Level 2

SIG | Genetics



CME & CE

Music City Center
105 A, Level 1

SIG | Neuroimaging



CME

Music City Center
104 A, Level 1

SIG | Pregnancy Outcomes



CME & CE

Music City Center
202 B, Level 2

SIG | Stereoelectroencephalography (sEEG)



CME & CE

Music City Center
Karl F. Dean Ballroom A1, Level 4

7:30 AM – 4:00 PM

AES and ASSFN Resident Epilepsy Surgery Course | Invitation Only

Music City Center

8:45 – 11:45 AM

Presidential Symposium



CME & CE

Music City Center
Karl F. Dean Ballroom B1, Level 4

12:00 – 6:00 PM

Exhibit Hall

Music City Center
Hall B, Level 3

12:00 – 6:00 PM

Poster Session 1

12:00 – 2:00 PM | Authors Present

Music City Center
Hall B, Level 3

12:15 – 1:45 PM

Poster Session 1 | Walking Tours

Music City Center
Hall B, Level 3

2:15 – 4:45 PM

Advanced Practice Provider Symposium



CME & CE

Music City Center
Karl F. Dean Ballroom A1, Level 4

Epilepsy Therapies Symposium



CME & CE

Music City Center
Karl F. Dean Ballroom B1, Level 4

2:15 – 4:30 PM

Platform A | Basic Mechanisms

Music City Center
202 B, Level 2

Platform B | Translational Research

Music City Center
205 B, Level 2

Platform C | Neuroimaging

Music City Center
103 B, Level 1

4:45 – 5:45 PM

Attendee Reception | Exhibit Hall

Music City Center
Hall B, Level 3

5:00 – 5:30 PM

Passport for Prizes Drawing

Music City Center
Hall B, Level 3

Schedule at-a-Glance

5:30–7:00 PM

Investigators Workshop | Advances of the Lafora Epilepsy Cure Initiative

 **CME & CE**

Music City Center
104 C, Level 1

Investigators Workshop | Metabolic Mechanisms of Epilepsy and Related Neurodevelopmental Disorders

Music City Center
209 B, Level 2

Investigators Workshop | Neuromodulation and Sleep in Epilepsy: Promises and Perils

Music City Center
106 B, Level 1

Investigators Workshop | What Can We Learn from Large Animal Models of Epilepsy?

Music City Center
105 A, Level 1

5:30–8:00 PM

Neurosurgery Symposium

 **CME & CE**

Music City Center
Karl F. Dean Ballroom B1, Level 4

Best Practices in Clinical Epilepsy Symposium

 **CME & CE**

Music City Center
Karl F. Dean Ballroom A1, Level 4

7:00–10:00 PM

11th Annual AES Wine Tasting and Silent Auction

Liberty Common

Sunday, December 4

7:00 AM–5:00 PM

Registration Open | Badge Pick-up

Music City Center
Hall A1, Level 3

8:00 AM–08:30 AM

AES Member Business Meeting

Omni Nashville
Legends Ballroom G, Level 2

8:00–11:00 AM

Scientific Exhibit | Behind the Seizure Program AES Scientific Exhibit: Transforming Genetic Epilepsy Diagnoses and Enhancing Care Pathways Via State-of-the-Art Research | Invitae Corporation

Music City Center
207 C, Level 2

Scientific Exhibit | Research Updates from Eisai | Eisai Inc.

Music City Center
208 A, Level 2

Scientific Exhibit | VNS Global Experience: Learning from the Past, Planning the Future | LivaNova

Music City Center
207 A, Level 2

8:45 AM–5:15 PM

Annual Course

 **CME & CE**

Music City Center
Karl F. Dean Ballroom B1, Level 4

8:45–10:15 AM

Investigators Workshop | Cellular Contributions to Epileptiform EEG

Music City Center
106 B, Level 1

Investigators Workshop | Neurosurgical Treatment of Generalized Epilepsy

Music City Center
209 B, Level 2

Investigators Workshop | Omics and Open Discovery: Challenges and Opportunities for Epilepsy Research

Music City Center
105 A, Level 1

Investigators Workshop | Standardizing TMS Language Mapping Protocol in Children

Music City Center
104 C, Level 1

10:00 AM–4:00 PM

Exhibit Hall

Music City Center
Hall B, Level 3

10:00 AM–4:00 PM

**Poster Session 2
12:00–2:00 PM | Authors Present**

Music City Center
Hall B, Level 3

10:30 AM–12:00 PM


Investigators Workshop | Extracting Neural Signals from Noise in Electrophysiological Data: Tools and Traps

Music City Center
106 B, Level 1

Investigators Workshop | Focused Ultrasound: A Rapidly Growing, New Approach to Epilepsy Treatment

Music City Center
105 A, Level 1

Investigators Workshop | Non-Seizure Outcomes in Developmental and Epileptic Encephalopathies

 **CME & CE**

Music City Center
209 B, Level 2

Investigators Workshop | The Neurocircuitry of Sudden Unexpected Death in Epilepsy: Insights from CURE Epilepsy-Funded Research

Music City Center
104 C, Level 1

12:00–1:30 PM

Poster Session | Basic Science Poster Highlights and Lunch

Music City Center
101 C, Level 1

12:15–1:45 PM

Poster Session 2 | Walking Tours

Music City Center
Hall B, Level 3

Schedule at-a-Glance

1:30–3:00 PM

Investigators Workshop | Inhibitory Plasticity, Ictogenesis, and Epileptogenesis

Music City Center
106 B, Level 1

Investigators Workshop | Integration of Brain Network Analysis into the Epilepsy Surgery Clinical Pipeline

Music City Center
104 C, Level 1

Investigators Workshop | Microglia in Seizures, Epilepsy, and Comorbidity

Music City Center
105 A, Level 1

Investigators Workshop | Riding the Wave: Current and Future Contributions of Zebrafish Models to Epilepsy Research



Music City Center
209 B, Level 2

2:00–5:00 PM

Scientific Exhibit | Marinus Scientific Updates on Ganaxolone | Marinus Pharmaceuticals, Inc.

Music City Center
208 A, Level 2

Scientific Exhibit | Recent Advancements in the Treatment of Seizure Clusters | Neurelis, Inc.

Music City Center
207 A, Level 2

Scientific Exhibit | Scientific Exhibit of Xenon's Clinical and Research Programs: Phase 3 Development Plans and Mechanism, Efficacy, and Safety of XEN1101, a Novel Potassium Channel Opener for the Treatment of Epilepsy | Xenon Pharmaceuticals

Music City Center
207 C, Level 2

2:00–4:00 PM

Special Lecture | IOM-NAM 10th Anniversary

Music City Center
202 B, Level 2

2:00–4:30 PM

Susan Spencer Symposium



Music City Center
Karl F. Dean Ballroom A1, Level 4

3:15–4:45 PM

Investigators Workshop | Advanced Gene and Cell-Based Therapies to Target General Mechanisms of Epilepsy

Music City Center
104 C, Level 1

Investigators Workshop | Diverse Roles of Interneuron Subtypes in Acquired Epilepsies

Music City Center
106 B, Level 1

Investigators Workshop | Iatrogenic Epilepsy and Encephalopathy in Immune Therapies for Cancer



Music City Center
209 B, Level 2

Investigators Workshop | Interaction between Physiological and Pathological Oscillations in Memory



Music City Center
105 A, Level 1

3:30–4:00 PM

Passport for Prizes Drawing

Music City Center
Hall B, Level 3

5:15–6:15 PM

Poster Session | Broadening Representation Inclusion and Diversity by Growing Equity (BRIDGE)

Music City Center
101 C, Level 1

6:00–9:00 PM

Industry Satellite Symposium | NeuroPace, Inc. – Paradigm Shifts in Epilepsy – How New Technology and Novel Care Models Are Being Used to Close the Epilepsy Treatment Gap

Music City Center
Davidson Ballroom C, Level 1M

Industry Satellite Symposium | UCB, Inc. – Long-term Outcomes of Treatment with BRIVIACT® (brivaracetam) and What it Means in the Real-world

Music City Center
Davidson Ballroom A, Level 1M

Industry Satellite Symposium | UCB, Inc. – Epilepsy Genetics Beyond the Pediatric Clinic: Applying Precision Medicine in Adult Epilepsy Patients

Music City Center
Davidson Ballroom B, Level 1M

6:00–7:30 PM

SIG | Engineering and Neurostimulation

Music City Center
105 A, Level 1

SIG | Epidemiology

Music City Center
104 A, Level 1

SIG | Ictal Semiology



Music City Center
Karl F. Dean Ballroom A1, Level 4

SIG | Neuropharmacology

Music City Center
102 A, Level 1

SIG | Practice Management

Music City Center
202 B, Level 2

SIG | Status Epilepticus

Music City Center
106 B, Level 1

SIG | Women's Issues in Epilepsy



Music City Center
104 C, Level 1

Schedule at-a-Glance

Monday, December 5

7:00 AM – 4:00 PM

Registration Open | Badge Pick-up

Music City Center
Hall A1, Level 3

7:00 – 8:30 AM

SIG | Epilepsy Education

Music City Center
202 B, Level 2

SIG | Epilepsy Surgery



Music City Center
102 A, Level 1

SIG | Intractable Generalized Epilepsy

Music City Center
105 A, Level 1

SIG | Neuropsychology

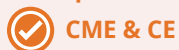


Music City Center
205 B, Level 2

SIG | Quality and Safety

Music City Center
104 A, Level 1

SIG | Seizures in Autoimmune Encephalitis



Music City Center
104 C, Level 1

SIG | Translational Research

Music City Center
106 B, Level 1

8:00 AM – 2:00 PM

Poster Session 3 12:00 – 1:45 PM | Authors Present

Music City Center
Hall B, Level 3

8:00 – 11:00 AM

Scientific Exhibit | DIACOMIT® (stiripentol): An Update on Mechanisms, Efficacy and Safety in the Treatment of Developmental & Epileptic Encephalopathies | BIOCODEX

Music City Center
207 C, Level 2

Scientific Exhibit | Epidiolex® (CBD) Treatment Outcomes, Safety, and Real-world Evidence | Jazz Pharmaceuticals, Inc.

Music City Center
208 A, Level 2

Scientific Exhibit | UCB: Leading with Science to Create Impact for Patients Living with Epilepsy | UCB, Inc.

Music City Center
207 A, Level 2

8:45 – 11:45 AM

Merritt-Putnam Symposium



Music City Center
Karl F. Dean Ballroom B1, Level 4

9:00 – 10:30 AM

SIG | Dietary Therapies for Epilepsy

Music City Center
104 A, Level 1

SIG | Health Disparities

Music City Center
202 B, Level 2

SIG | Neuroendocrinology

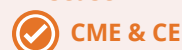
Music City Center
102 A, Level 1

SIG | Psychosocial Comorbidities



Music City Center
209 B, Level 2

SIG | Seizures and Cerebrovascular Disease



Music City Center
205 B, Level 2

SIG | Temporal Lobe Club



Music City Center
104 C, Level 1

Special Lecture | AES-NAEC Joint Coding Session



Music City Center
106 B, Level 1

Special Lecture | ILAE-IBE Session: Moving Forward in Epilepsy Care

Music City Center
105 A, Level 1

9:00 – 11:30 AM

Special Lecture | Sleep and Epilepsy Across the Lifespan



Music City Center
Karl F. Dean Ballroom A1, Level 4

10:00 AM – 2:00 PM

Exhibit Hall

Music City Center
Hall B, Level 3

12:15 – 1:45 PM

Poster Session 3 | Walking Tours

Music City Center
Hall B, Level 3

1:30 – 2:00 PM

Passport for Prizes Drawing & Grand Prize

Music City Center
Hall B, Level 3



Schedule at-a-Glance

2:00 – 5:00 PM

Scientific Exhibit | A Novel 5HT_{2C} Superagonist for Treatment of Rare Seizure Disorders: LP352 and the PACIFIC Study | Longboard Pharmaceuticals

Music City Center
207 A, Level 2

Scientific Exhibit | MR Imaging Considerations for Patients with Multiple Neurological Implants | Ad-Tech Medical Instrument Corporation

Music City Center
207 C, Level 2

Scientific Exhibit | SK Life Science Special Scientific Exhibit and Posters | SK Life Science, Inc.

Music City Center
208 A, Level 2

2:00 – 3:30 PM

Special Lecture | Lombroso Lecture

Music City Center
Karl F. Dean Ballroom B1, Level 4

3:15 – 5:30 PM

Pediatric Epilepsy Highlights

Music City Center
101 C, Level 1

Platform D | Neurophysiology

Music City Center
202 B, Level 2

Platform E | Clinical Epilepsy

Music City Center
103 B, Level 1

Platform F | Genetics & Behavior / Neuropsychology/Language

Music City Center
205 B, Level 2

4:30 – 6:30 PM

Special Lecture | Dialogues to Transform Epilepsy

Music City Center
106 B, Level 1

5:45 – 8:15 PM

Pediatric State of the Art Symposium

 **CME & CE**

Music City Center
Karl F. Dean Ballroom B1, Level 4

6:00 – 9:00 PM

Industry Satellite Symposium | Ad-Tech Medical Instrument Corp. – Building a Successful Single Unit Research Group and Best Practices in Capturing Single Unit Recordings

Music City Center
Davidson Ballroom C, Level 1M

Industry Satellite Symposium | Neurelis, Inc. – Intermittent Rescue Therapy for Seizure Clusters: Hypothesis-Generating Observation of Change Across Time in SEIZure InterVAL (Time Between Seizure Clusters)

Music City Center
Davidson Ballroom A, Level 1M

Industry Satellite Symposium | Takeda Pharmaceuticals – Rational Polytherapy in Dravet and Lennox-Gastaut Syndromes: Current and Future Approaches

Music City Center
Davidson Ballroom B, Level 1M

6:00 – 7:30 PM

SIG | Neonatal Seizures

Music City Center
105 A, Level 1

SIG | Professional Wellness in Epilepsy Care

Music City Center
204, Level 2

SIG | SUDEP

Music City Center
205 B, Level 2

SIG | Tuberous Sclerosis Complex (TSC)

 **CME & CE**

Music City Center
202 B, Level 2

SIG | Tumor-Related Epilepsy (TRE)

 **CME & CE**

Music City Center
102 A, Level 1

Tuesday, December 6

7:00 AM – 12:30 PM

Registration Open | Badge Pick-up

Music City Center
Hall A1, Level 3

7:00 – 8:30 AM

SIG | Basic Mechanisms and Neuroscience of Epilepsy


Music City Center
202 B, Level 2

SIG | EEG

 **CME**

Music City Center
204, Level 2

SIG | Epilepsy and Aging

 **CME & CE**

Music City Center
105 A, Level 1

SIG | Pediatric Epilepsy Case Discussions

 **CME & CE**

Music City Center
102 A, Level 1


SIG | Psychogenic Non-Epileptic Seizures (PNES)

 **CME & CE**

Music City Center
106 B, Level 1

8:45 – 10:45 AM

Hot Topics Symposium

 **CME & CE**

Music City Center
Karl F. Dean Ballroom B1, Level 4

Scientific Symposium

 **CME & CE**

Music City Center
Karl F. Dean Ballroom A1, Level 4

Schedule at-a-Glance

11:00 AM – 12:30 PM

Clinical Skills Workshop | Genetics Testing in Epilepsy Patients

Music City Center
106 B, Level 1

Clinical Skills Workshop | Intracranial Electrode Studies

Music City Center
105 A, Level 1

Clinical Skills Workshop | Misadventures in EEG

Music City Center
102 A, Level 1

Clinical Skills Workshop | Neuroimaging Case Review: Conventional and Computer-assisted Analysis

Music City Center
202 B, Level 2

Clinical Skills Workshop | Neurostimulation in Epilepsy

Music City Center
205 B, Level 2

Clinical Skills Workshop | Pearls of Video EEG

Music City Center
103 B, Level 1

12:45 – 2:15 PM

Clinical Skills Workshop | Genetics Testing in Epilepsy Patients

Music City Center
106 B, Level 1

Clinical Skills Workshop | Intracranial Electrode Studies

Music City Center
105 A, Level 1

Clinical Skills Workshop | Misadventures in EEG

Music City Center
102 A, Level 1

Clinical Skills Workshop | Neuroimaging Case Review: Conventional and Computer-assisted Analysis

Music City Center
202 B, Level 2

Clinical Skills Workshop | Neurostimulation in Epilepsy

Music City Center
205 B, Level 2

Clinical Skills Workshop | Pearls of Video EEG

Music City Center
103 B, Level 1

AES Member Business Meeting

AES members: Join us for reflections and updates from AES President, R. Edward Hogan, MD, FAES, on the essential business of the Society. Learn about recent accomplishments, changes, financials, and more.

Omni Hotel, Legends Ballroom G
Sunday, December 4 | 8:00 – 8:30 AM



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This is where you belong.

Join our diverse, collegial community of epilepsy professionals working together to treat and cure epilepsy.

AES members receive:

- Bi-weekly member newsletters, special announcements, and exclusive offers
- Significant discounts on annual meeting registration and educational programs
- A free print subscription to *Epilepsy Currents*, the highly-rated commentary and literature review journal from AES—providing members with a quick and easy way to keep up-to-date on epilepsy
- A free subscription to *Epilepsia*, the research journal of the ILAE*
- Listing in the AES Find-A-Doctor online directory*
- Access to *AES Connect*, our exclusive members-only online community
- Information on research grants, travel awards, and fellowships
- ... and much more!

Learn more at aesnet.org/membership or visit our membership team at the Member Center.



**Benefit of select membership types*

How to Claim Credit for Your Participation in AES 2022

For your convenience, credit can be claimed via the AES 2022 mobile app or the AES website!

- Click CREDIT CLAIM and select LIVE ANNUAL MEETING or DIGITAL SELECT
- Log in using your email address and registration ID (this is the number in the lower left-hand corner of your conference badge, and can also be found in the confirmation email you received when you registered).
- Complete each session evaluation commensurate with your participation.
- Once you have completed the session evaluation(s), complete your evaluation of the meeting overall (you must complete individual session **and** the overall meeting evaluations to earn credit and receive a certificate of completion).
- Credits will be reported to your AES transcript within 7 days of your submission.

Questions? Email education@aesnet.org



Say hello and grab some ribbons at the AES Member Center

Stop by the AES Member Center, conveniently located on the 3rd floor concourse between registration and the exhibit hall, near the Grand Lobby.

Our friendly membership staff is eager to serve as your one-stop resource for membership information.

DECORATE YOURSELF

That name badge you are wearing wants company! Whether you are a first-timer, a ten-year veteran, a generous donor, an AES committee member, a Fellow of the American Epilepsy Society, or some other role, announce it all meeting long with a ribbon on your name badge. Pick up your ribbons at the Member Center.

This is where you belong.

8:30 – 9:45 AM

Professional Development | Career Skills: Interdisciplinary Team Building

Music City Center, Room 209 B, Level 2

Overview

The care for people with epilepsy requires input from multiple disciplines and professionals. Trainees may not have exposure to all the team members and the contributions they provide. This session allows them to interact with other professionals and understand the value that they bring to the team.

In 1972, the Institute of Medicine (IOM) encouraged team-based education to develop healthcare teams that share the goal of improving care with the patient and their families. In 2010, the World Health Organization (WHO) reiterated the importance for healthcare workers to collaborate with other professionals globally to improve care quality.

The National Association of Epilepsy Centers (NAEC) describes the team approach for the care of people with epilepsy as neurologists and neurosurgeons, neuropsychologists, nurse specialists, electroencephalography (EEG) technologists, and other personnel with special training and experience in the treatment of epilepsy to develop individualized treatment plans.

This panel presentation introduces participants to members of the interdisciplinary team with whom they may not interact on a regular basis. The panelists each describe their function on the interdisciplinary team. By the end of the session, participants will have a broader appreciation of all members of the care team and will be equipped to collaborate with team members effectively.

Learning Objectives

Following participation in this activity, participants will be able to:

- Identify members of an interdisciplinary epilepsy care team
- Discuss the contribution that each member brings to the epilepsy care team
- Collaborate effectively with local members of the epilepsy care team

Chairs: Lynn Liu, MD, MS; and Elizabeth Felton, MD, PhD

Program

Research Scientist | David Auerbach, PhD, FAES

Clinician Scientist |

Shawniqua Williams Roberson, MEng, MD

Advanced Practice Provider |

Julie DesMarteau, RD, MPAS, PA-C

Neuropsychologist | John Langfitt, PhD

Dietitian | Kelly Faltersack, MS, RDN, LD, CD

Social Worker | Meghann Soby, MSW, LCSW

Pharmacist | Jon Cokley, PharmD

Registrants: Find the most up-to-date information at aesnet.org/AES2022

8:30 – 11:30 AM

Epilepsy Specialist Symposium | What is a Seizure After All?

Music City Center, Karl F. Dean Ballroom B1, Level 4



Overview

The word “seizure” can have multiple definitions and meanings. Epilepsy can be defined as a medical condition characterized by a tendency to have seizures. Therefore, the definition of “seizures” takes primordial importance in the diagnosis and management of patients with epilepsy.

This symposium aims to define “seizures” from different points of view. Provocative basic, computational, cellular, and translational lectures will set the tone for controversial intracerebral recordings and clinical discussions. By bringing together professionals from different fields, this symposium provides a comprehensive concept of the seizure, the center of what we do.

Learning Objectives

Following participation in this activity, participants will be able to:

- Recognize different ways to define seizures
- Discuss one definition of seizure
- Describe an example of a clinical controversy in the definition of seizures

Chairs: Ignacio Valencia, MD, FAES; and Barbara Jobst, MD, PhD, FAES

Program

Introduction | Ignacio Valencia, MD, FAES

The Tortuous Route from Interictal Activity to Seizures. | Jean Gotman, PhD

How are Seizures Defined at the Microscopic Level: From the Cell to the Microcircuit to the Live Animal | Yuliya Voskobiynyk, PhD

Of Mice, Rats and Men: What Do We Have in Common? | Jana Velíšková, MD, PhD

How Do We Define Seizures with Intracerebral Recording in Humans? | Patrick Chauvel, MD

Clinical Controversies on the Definition of a “Seizure” | Michael Sperling, MD, FAES

Panel Discussion | All Faculty

Education Credit:

3.0 CME

At the time of printing this program, the application for nursing and pharmacy CE credits had been submitted and was pending approval from the Office of Interprofessional Continuing Professional Development. Please refer to aesnet.org/AES2022-accredited for a complete list of accredited sessions.

Program | Friday, December 2

9:00 AM – 4:00 PM

Other Programming | 35th Annual Advances in the Management of Epilepsy and the Epilepsy Clinic

Hilton Nashville Downtown, Boone, Mezzanine Level
See page 114 for details. Separate registration required.

9:00 AM – 12:00 PM

AES-CNF Symposium | Genetic Testing in Epilepsy: Improving Outcomes and Informing Gaps in Research

Music City Center, Room 104 C, Level 1



Overview

This session raises participant awareness of the value of genetic testing, and how to mobilize their energy and ability to expand the use of genetic testing for patients with epilepsy. The session explores challenges and obstacles in the use of genetic testing, and provides take-aways, ideas, and other resources to overcome those barriers. Increased use of genetic testing will increase the number of patients with an accurate diagnosis, leading to improved quality of life and greater emotional well-being among patients and families, improved treatment plans using precision treatments, and better patient outcomes. This session gives researchers more data to support basic science research and identify research gaps, especially within rare epilepsies.

Learning Objectives

Following participation in this activity, participants will be able to:

- Evaluate when to use genetic testing
- Determine what genetic test is appropriate for a patient
- Order or refer their patients to genetic testing options
- Go beyond seizure management, to diagnosis and treatment

Chairs: Anup Patel, MD, FAES; and Sarah Kelley, MD

Moderator: Paul Cooper

Program

Introduction | Anup Patel, MD, FAES

Improving the Patient and Caregiver Experience | Leah Myers, Parent/Advocate

Impacts on Clinical Care | John Millichap, MD, FAES, FAAN, FAAP, FACNS

Long-term Research Gains | Jacy Wagnon, PhD

Testing Considerations | Heather Mefford, MD, PhD

How to Manage the Most Common Barriers |

Tamara Reynolds, MS, CGC

Panel Discussion | All Faculty

Education Credit:

3.0 CME

At the time of printing this program, the application for nursing and pharmacy CE credits had been submitted and was pending approval from the Office of Interprofessional Continuing Professional Development. Please refer to aesnet.org/AES2022-accredited for a complete list of accredited sessions.

10:00 – 11:15 AM

Professional Development | Career Pathways: Clinical Care Emphasis Panel

Music City Center, Room 207 B, Level 2

Overview

Participants explore career options through three concurrent Career Pathways panels, each with a different emphasis: Research, Clinical Care, and Interprofessional. Participants may go between sessions, which take place in adjacent rooms. Hear from experts who have walked in your shoes and can offer advice on your next career move in the Clinical Care Career Pathways panel!

This panel covers a breadth of career options in academia, private practice, industry, telehealth, and government and is designed to share panelists' career trajectories and the nature of their work. Speakers have been selected based on their experience and expertise in their fields. Explore career options through an insightful discussion with experienced panelists.

Learning Objective

Following participation in this activity, participants will be able to:

- Employ key skills to determine which career path would be most fitting for their future

Chairs: Thomas Wychowski, MD; and Elizabeth Felton, MD, PhD

Panelists: Sara Inati, MD, FAES; Lynn Liu, MD; Sushma Yerram, MD; Deana Bonno, MD; Eric Anderson, MD, PhD; Joceyln Cheng, MD, FAES; and Craig Henry, MD



10:00 – 11:15 AM

Professional Development | Career Pathways: Interprofessional Panel

Music City Center, Room 208 A, Level 2

Overview

Participants explore career options through three concurrent Career Pathways panels, each with a different emphasis: Research, Clinical Care, and Interprofessional. Participants may go between sessions, which take place in adjacent rooms. Hear from experts who have walked in your shoes and can offer advice on your next career move in the Interprofessional Pathways panel!

This panel shares interprofessional career pathway options for non-physician healthcare providers. Hear from a later-career nurse practitioner (NP) with academic appointment and Principal Investigator (PI) status on her research endeavors, a mid-career NP with experience in pediatric mental health, an academic center social worker, and a pharmacist.

Presenters first give a synopsis of their career path trajectories followed by interactive Q&A with the audience. Topics of research involvement, academic appointment, mental health expertise, ambulatory neurology-focused social work, and neurologic PharmD experiences will be discussed.

Learning Objectives

Following participation in this activity, participants will be able to:

- Describe options for Advanced Practice Provider (APP) academic appointment and research involvement
- Discuss how prior work experience in pediatric mental health is an advantage in pediatric epilepsy care
- Discuss a social worker’s journey to ambulatory neurology care and a PharmD’s contribution to epilepsy team-based care

Chair: Kelly Conner, PhD, MMS, PA-C

Program

Academic Appointment and Research |

Lucretia Long, APRN-CNP, FAES

Mental Health Experience Advantages in Pediatric Epilepsy Care |

Tracee Ridley-Prior, DNP, APRN, PMHNP-BC

Social Work Integration into Epilepsy Team-Based Care |

Emily Owen, MSW

Pharmacist Integration into Epilepsy Team-Based Care |

Jon Cokley, PharmD, BCPPS

10:00 – 11:15 AM

Professional Development | Career Pathways: Research Emphasis Panel

Music City Center, Room 209 B, Level 2

Overview

Participants explore career options through three concurrent Career Pathways panels, each with a different emphasis: Research, Clinical Care, and Interprofessional. Participants may go between sessions, which will take place in adjacent rooms. Hear from experts who have walked in your shoes and will offer advice on your next career move in the Research Emphasis Pathways panel! Understanding career options in research across a range of industries can better prepare fellows / trainees for the road ahead.

This panel highlights a breadth of career options in industry, non-profit, government, and academic sectors. Participants have the opportunity to ask questions regarding the transition to career paths that fit their interests and skills.

Understanding career paths in research across a range of settings can better prepare early career scientists for the road ahead. This panel highlights a breadth of career options in industry, non-profit, government, and academic sectors (including research- and teaching-focused positions). In this interactive session, panelists share their career trajectories and current positions, including challenges and wins along the way. Attendees are encouraged to engage with panelists in breakout sessions following the panel discussion.

Learning Objectives

Following participation in this activity, participants will be able to:

- Identify multiple career path options for researchers
- Evaluate factors to help determine which career path(s) are the best fit for their interests and skills

Chairs: Candi LaSarge, PhD; and Joaquin Lugo, PhD, FAES

Panelists: Miriam Leenders, PhD; Veronica Hood, PhD; Lauren Harte-Hargrove, PhD; Heather Vita, PhD; Koji Takahashi, PhD; Fraser Sparks, PhD; Nadia Khan, PhD; Susan Masino, PhD; Esther Krook-Magnuson, PhD; and Edward Glasscock, PhD

11:30 AM – 12:45 PM

Professional Development | Career Skills: Surviving First Year as Faculty / Attending

Music City Center, Room 207 B, Level 2

Overview

The first year as a faculty member is often a challenging time, with significant changes in goals, metrics of success, and roles often occurring in the transition from training to a first-time faculty / attending role.

Program | Friday, December 2

Young professionals preparing for faculty/attending roles can benefit from tips and reflections on the initial faculty/attending experience among a diverse panel of more seasoned professionals, representing the full range from bench research to clinical practice roles. This session provides an interactive experience for attendees with meaningful tips for a smooth initial faculty/attending experience.

Few epilepsy professionals finish their first year as a faculty member/attending without significant lessons learned and subsequent adjustments to their professional role and career approach. This interactive session is an opportunity for young epilepsy professionals to hear a diverse group of faculty/attendings reflect on the early faculty experience and provide key tips and advice. The goal is to equip young professionals with wisdom to promote success in the early transition to a faculty/attending role. After a brief presentation summarizing top tips for the transition out of training, there will be an interactive panel discussion among individuals with expertise in basic science, medical education, clinical research, and clinical practice, with audience participation encouraged.

Learning Objectives

Following participation in this activity, participants will be able to:

- Implement techniques to promote success as a first-year faculty member/attending
- Discuss strategies to avoid common pitfalls of the initial faculty/attending year

Chair: Heidi Munger Clary, MD, MPH

Panelists: Senyene Hunter, MD, PhD; David Klorig, PhD; Leah Blank, MD, MPH; Afsaneh Talai, MD; Nina Garga, MD, FAES; Veeresh Kumar N. Shivamurthy, MD; and Rani Singh, MD

Program

Top 10 Tips to Survive Your First Year Out of Training |
Heidi Munger Clary, MD, MPH

Top Tips for Basic Science Faculty: Setting Up a Lab |
Edward Glasscock, PhD

12:30 – 3:00 PM

Annual Fundamentals Symposium | Beyond Seizure Treatment: Tapping into the Community for Care

Music City Center, Karl F. Dean Ballroom B1, Level 4

 CME & CE

Overview

Providers may be unaware of the critical importance to people with epilepsy and their carers of the non-seizure morbidities and consequences of epilepsy. Some may be afraid to ask because they do not know what to do or do not have the resources to help.

Some epilepsy providers may see this as being outside their domain of expertise and responsibility. Patients are also often unwilling to discuss with epilepsy providers issues that can be intimate, painful, or embarrassing. This creates a chasm in communication and care that can have a profound negative impact on the individual and contribute to provider frustration.

This symposium opens with a presentation of the results from the International Consortium for Health Outcomes Measurement (ICHOM) project to highlight outcomes that people living with epilepsy have identified as critical to their quality of life and peace of mind. These are outcomes that can be validly measured at the point of care and can serve as guideposts for quality improvement efforts. Presentations address three areas of critical concern in separate talks: behavioral health, cognitive health, and complex medical care needs in individuals with developmental and epileptic encephalopathies.

Models for bridging the gap between clinic-based seizure care and the greater spectrum of care needed through community partnerships and self-management are presented. Panelists include people living with epilepsy, who discuss the importance of non-seizure outcomes and their experiences with alternative and complementary approaches and the role of self-efficacy in managing their epilepsy to optimize their quality of life.

Learning Objectives

Following participation in this activity, participants will be able to:

- Describe the purpose and importance of applying the ICHOM standard set to evaluate value-based healthcare in their local setting and be able to identify at least three specific actions they might implement toward improving non-seizure outcomes in people with epilepsy and their families
- Identify approaches to forming partnerships with epilepsy-focused social services agencies and gain familiarity in outreach and methods that may help target rural and under-served people with epilepsy
- Identify common behavioral and cognitive difficulties facing people with epilepsy, screen for these difficulties, and provide information to patients and families about community resources outside of the epilepsy clinic, such as Managing Epilepsy Well (MEW) and HOme-Based Self-management and COgnitive Training CHanges lives (HOBSCOTCH)
- Describe at least six areas of severe morbidity and impairment and their inter-relations in patients with Developmental and Epileptic Encephalopathy (DEE) that require further diagnosis, treatment, and management by physicians and other allied health professionals outside of epilepsy/seizure-care

Chairs: Anne T. Berg, PhD; and Martha Sajatovic, MD

Program

Introduction | Anne T. Berg, PhD

Core Outcomes for Epilepsy: The ICHOM Standard Set |
James Mitchell, MBChB

Behavioral Health Across the Spectrum |

Janelle Wagner, PhD, FAES

Addressing the Cognitive Difficulties of Epilepsy |

Barbara Jobst, MD, PhD, FAES

Self-management and the Self: Partnering with the Community to Improve Outcomes for People with Epilepsy | Martha Sajatovic, MD

Raising the Stakes: Complexities for Patients with Neurodevelopmental Disorders | Anne T. Berg, PhD

Panel Discussion | All Faculty

Education Credit:

2.5 CME

At the time of printing this program, the application for nursing and pharmacy CE credits had been submitted and was pending approval from the Office of Interprofessional Continuing Professional Development. Please refer to aesnet.org/AES2022-accredited for a complete list of accredited sessions.

12:30 – 3:00 PM

Special Lecture | Epilepsy Research Benchmarks: Understanding Underlying Mechanisms of Epilepsy and its Co-Morbid Conditions

Music City Center, Karl F. Dean Ballroom A1, Level 4

Overview

The 2021 Curing the Epilepsies Conference resulted in the development of new research benchmarks that identify research priorities for the field. The AES Epilepsy Research Benchmarks Stewards Committee will plan a special lecture each year taking a deep dive into one of the Benchmarks areas. The 2022 session focuses on Area 1: Understand the Causes of the Epilepsies and Their Relationship to Epilepsy-associated Neurologic, Psychiatric, and Somatic Conditions.

This session features a series of three presentations exploring the current state of research on epilepsies and their co-morbidities, identifying gaps in the field, and considering emerging research priorities for the future. Speakers discuss highlights and challenges of studying the relationship between mechanisms that underlie epilepsies and common co-morbidities, including discussion of animal models of a co-morbid condition and how molecular and genetic events can impact behavior. A panel discussion considers how this research can be translated into the development of targeted treatments.

Learning Objectives

Following participation in this activity, participants will be able to:

- Review the current state of research on the causes of epilepsies and their co-morbidities
- Recognize the gaps in knowledge regarding the causes of epilepsies and their co-morbidities

- Develop priorities for research to improve our understanding of the causes of epilepsies and their co-morbidities

Chairs: Nathalie Jette, MD, MSc, FAES, FRCPC; and Heather Mefford, MD, PhD

Program

Introduction | Nathalie Jette, MD, MSc, FAES, FRCPC

Family Story | Mike Gralia, MBA, MA

Highlights and Challenges in the Field Related to the Relationship Between the Mechanisms that Underlie the Epilepsies and Commonly Co-occurring Conditions | Vaishnav Krishnan, MD, PhD

Defined Neuronal Populations Drive Fatal Phenotype in a Mouse Model of Leigh Syndrome | Franck Kalume, PhD

How Molecular and Genetic Events on Cellular and Network Function Ultimately Impact Behavior | Helen Bateup, PhD

Panel Discussion | All Faculty and Lori Isom, PhD, FAES

1:00 – 3:00 PM

Special Lecture | Epilepsy Fellowship Program Directors Meeting

Music City Center, Room 202 B, Level 2



Overview

The AES Epilepsy Fellowship Program Directors Meeting is an annual education activity that provides continuing medical education (CME) credits for program directors running fellowships in epilepsy and clinical neurophysiology training programs. The session includes general updates for fellowship program directors, as well as opportunities for open discussion. This year the program will focus on the National Resident Matching Program (the NRMP Match), which is scheduled to begin in 2023 for fellows who will begin their fellowship the following year. The meeting will also discuss the updated 2021 ACGME Epilepsy Milestones, as well as strategies to help program directors prepare epilepsy fellows for clinical practice.

Learning Objectives

Following participation in this activity, participants will be able to:

- Describe the NRMP Match process for epilepsy and clinical neurophysiology fellowships, and implement it at the program director's institution
- Implement updated ACGME Epilepsy Milestones to provide formative feedback for epilepsy fellows
- Describe strategies to prepare epilepsy fellows for clinical practice across a wide variety of practice models

Chair: Sarah Schmitt, MD, FAES

Program | Friday, December 2

Program

NRMP Match Update | Sarah Schmitt, MD, FAES

ACGME Milestones Update | Brian Keith Day, MD, PhD

Preparing Fellows for Clinical Practice |
David Burkholder, MD

1:30–3:00 PM

SIG | Clinical Epilepsy for the Advanced Practice Provider: Subspecialty Clinics — Leveraging APPs to Improve Access

Music City Center, Room 106 B, Level 1



Overview

Access to specialized epilepsy care continues to be a challenge across the lifespan. This session utilizes subspecialty clinic APPs to describe development of subspecialty clinics and how to expand access for patients, as well as management of a variety of subspecialty clinics, including Functional Neurologic Disorder, Ketogenic Diet Clinic, and Transition Clinic. A panel discussion supports the learner to identify ways to implement subspecialty clinics in their practice.

Learning Objectives

Following participation in this activity, participants will be able to:

- Identify steps to development of subspecialty clinics
- Differentiate the APP role in subspecialty clinics
- Describe three different subspecialty clinic populations

SIG Coordinators:

Erin D. Fecske, DNP, APRN, CNRN, CPNP-PC, FAES;
Crystal Epley, MSN, APRN, FNP-C;
and Julie DesMarteau, MPAS, PA-C

Chairs: Erin D. Fecske, DNP, APRN, CNRN, CPNP-PC, FAES;
and Crystal Epley, MSN, APRN, FNP-C

Program

Introductions |

Erin D. Fecske, DNP, APRN, CNRN, CPNP-PC, FAES

New Subspecialty Clinic Development |

Breanne Fisher, APRN, PHR

Functional Neurologic Disorders Clinic |

Crystal Epley, MSN, APRN, FNP-C

Ketogenic Diet Clinic |

Erin D. Fecske, DNP, APRN, CNRN, CPNP-PC, FAES

Transition Clinic | Julie DesMarteau, RD, MPAS, PA-C

Education Credit:

1.5 CME

At the time of printing this program, the application for nursing and pharmacy CE credits had been submitted and was pending approval from the Office of Interprofessional Continuing Professional Development. Please refer to aesnet.org/AES2022-accredited for a complete list of accredited sessions.

1:30–3:00 PM

SIG | Developmental and Epileptic Encephalopathies (DEE): Developmental and Epileptic Encephalopathy — From Diagnostic to Treatment Odyssey

Music City Center, Room 204, Level 2



Overview

There are several gaps between diagnosing a patient with Developmental and Epileptic Encephalopathy (DEE) and finding an effective treatment. This SIG focuses on the current odysseys for patients with DEEs: 1) Diagnostic Odyssey: new genes causing DEEs were identified in the last 2-3 years. This talk presents an overview of DEE gene discovery, discussing trajectory and trends, and then delves into detail regarding several phenotypes associated with novel genes reported over the last few years (e.g., BRAT1, CSNK2B, NBEA, etc.). 2) Treatment Odyssey: DEEs are mostly still resistant to anti-seizure treatment and no traditional treatment aims at restoring cognitive and behavioral dysfunction. Faculty address the precision therapies for DEEs, including those in the pipeline, in clinical trials, and those already approved. 3) Resources Odyssey: since these are rare diseases, there are not many resources available.

However a few family-led organizations have stepped up and created important ways to facilitate and fund research towards a cure for DEEs. Participants will see how these organizations are promoting research / patients / physicians initiatives and results.

Learning Objectives

Following participation in this activity, participants will be able to:

- Describe the clinical manifestations of DEEs (and their genetic causes) described in the last 3 years
- List the precision therapies available in trials and in the pipeline for patients with different DEEs
- Demonstrate the importance of family-led organizations in the development of treatments for DEEs

SIG Coordinators: Danielle M. Andrade, MD, MSc, FRCPC;
Anthony Fine, MD; and Tristan Sands, MD, PhD

Chair: Danielle M. Andrade, MD, MSc, FRCPC

Program

New DEE Genes on the Block and Where Are We Going in Epilepsy Gene Discovery? | Trisan Sands, MD, PhD



The New Odyssey: Finding the Right Precision Therapy for DEEs. Where Are We Now? What's In the Pipeline? | Elia M. Pestana Knight, MD, FACNS

How DEE Parent-led Organizations are Propelling Research and Therapy Development for DEEs | Veronica Hood, PhD

Breaking Down Barriers in DEEs: The Advantages and Obstacles in Data Sharing | Marta Dahiya, MD

Education Credit:

1.5 CME

At the time of printing this program, the application for nursing and pharmacy CE credits had been submitted and was pending approval from the Office of Interprofessional Continuing Professional Development. Please refer to aesnet.org/AES2022-accredited for a complete list of accredited sessions.

1:30–3:00 PM

SIG | Global Health: Optimizing Epilepsy Care in Areas in Need — Training and Program Building

Music City Center, Room 208 A, Level 2



Overview

There is limited epilepsy training in low-to-middle income countries (LMICs) or regions in need, directly affecting epilepsy care. This SIG includes testimonies of two patients with epilepsy living in poor resource areas. They share with the audience the challenges they faced in order to receive appropriate care. The president of the epilepsy society from Mexico discusses challenges in building epilepsy-training programs in Spanish Speaking Latin America. A speaker from the Caribbean deliberates on use of quality improvement (QI) projects to improve epilepsy care in areas with minimal resources. A nurse from Kenya emphasizes the role of nurses and clinical officers in poor resource regions and the importance of establishing local training programs. Finally, Dr. Philip Pearl from the USA moderates a panel discussion about ways to support training and improve epilepsy care in LMICs.

Learning Objectives

Following participation in this activity, participants will be able to:

- Identify challenges faced by patients living in LMICs or areas in need and application of QI measures to improve epilepsy care in these regions
- Recognize actual situation of epilepsy training in Latin America
- Be aware of the role of nursing in epilepsy care in resource limited regions

SIG Coordinators: Jorge Vidaurre, MD, FAES; Dave F. Clarke, MBBS, FAES; and Ruta Yardi, MD

Chairs: Jorge Vidaurre, MD, FAES; and Dave F. Clarke, MBBS, FAES

Program

Challenges in Building Epilepsy Training in Spanish Speaking Latin America | Daniel San Juan Orta, MD, FAES

Advancing Epilepsy Care in Poor Resource Regions with Small Populations (<500,000) From Advocacy Through the Implementation of Quality Measures | Gaden Osborne, MD

Role of Nurses and Clinical Officers in Improving Epilepsy Care in Areas in Need. The Kenya Experience. | Symon M. Kariuki, MSc, DPhil

Role of Multi-society Collaboration in Improving Epilepsy Training in LMICs | Phillip L. Pearl, MD, FAES

Education Credit:

1.5 CME

At the time of printing this program, the application for nursing and pharmacy CE credits had been submitted and was pending approval from the Office of Interprofessional Continuing Professional Development. Please refer to aesnet.org/AES2022-accredited for a complete list of accredited sessions.

2:30–5:00 PM

Spanish Symposium | Seizures and Use of Electroencephalography (EEG) in the ICU

Music City Center, Room 105 A, Level 1

Presented entirely in Spanish



Overview

There is a serious lack of knowledge on the topic of Continuous EEG (cEEG) in the critically ill. This session addresses some of the basic science behind EEG findings, the use of cEEG, nomenclature of abnormalities, and how it is being used in low-resource countries.

Learning Objectives

Following participation in this activity, participants will be able to:

- Review the role of certain EEG biomarkers of epileptogenic activity
- Use terminology accepted in the medical community
- Identify abnormalities seen in cEEG recordings
- Identify limitations related to monitoring epileptiform activities and seizures in those critically ill

Chair: Jorge Burneo, MD, MSPH, FAES

Program

Introduction | Jorge Burneo, MD, MSPH, FAES

Program | Friday, December 2

The Role of High Frequency Oscillations in Epilepsy, Epileptogenesis and Drug-resistant Epilepsy |

Cesar Santana-Gomez, MsC, PhD

Periodic and Rhythmic Patterns in Critically Ill Patients |

Miguel Arévalo-Astrada, MD

The Use of Continuous EEG in the Critical Care Setting: What Do We Do When Resources are Limited? |

Luis Carlos Mayor Romero, MD, FAES, FACNS

Long-term EEG Monitoring and Quantitative EEG Trends for Seizure Detection Throughout the Life Span: Neonates |

Maite La Vega-Talbott, MD

Case Illustration of Seizures in a Critically Ill Patient |

Clio Rubinos, MD

Panel Discussion | All Faculty

Education Credit:

2.5 CME

At the time of printing this program, the application for nursing and pharmacy CE credits had been submitted and was pending approval from the Office of Interprofessional Continuing Professional Development. Please refer to aesnet.org/AES2022-accredited for a complete list of accredited sessions.

4:00–5:30 PM

Special Lecture | 20th Judith Hoyer Lecture in Epilepsy: Children Are Different—Advances in Early Life Epilepsy Assessment, Treatment, and Outcomes

Music City Center, Karl F. Dean Ballroom B1, Level 4

Special Presentations: Distinguished Service Award, Extraordinary Contribution Award



NINDS Director's Update: Walter Koroshetz, MD, Director, National Institute of Neurological Disorders and Stroke (NINDS) at the National Institutes of Health

Overview

Treatments and outcomes from epilepsy surgery are often different in children than adults. This session describes state-of-the-art care for infants and children with epilepsy, including early epilepsy surgery and epilepsy and cognitive outcomes. This session reviews differences in pediatric epilepsy care that take place in the setting of development and plasticity that need to be incorporated in care models. While much of the session focuses on epilepsy surgery, it also touches upon advances in pediatric epilepsy genetics that are transforming epilepsy care.

Learning Objectives

Following participation in this activity, participants will be able to:

Discuss the developmental context of pediatric care

- Recognize the capacity and limitations of brain plasticity
- Identify surgical epilepsy outcomes in pediatric epilepsy surgery
- Recognize cognitive and behavioral outcomes in pediatric epilepsy surgery
- Review the range of how advances in epilepsy genetics inform clinical expression of disease and treatment

Lecturer: William Davis Gaillard, MD, FAES

Program

Children Are Different: Advances in Early Life Epilepsy Assessment, Treatment, and Outcomes |

William Davis Gaillard, MD, FAES

Education Credit:

0.75 CME

At the time of printing this program, the application for nursing and pharmacy CE credits had been submitted and was pending approval from the Office of Interprofessional Continuing Professional Development. Please refer to aesnet.org/AES2022-accredited for a complete list of accredited sessions.

5:00–6:30 PM

Basic Science Skills Workshop | Addressing Sex as a Biological Variable in Epilepsy and Beyond

Music City Center, Room 106 B, Level 1

Overview

Between 1997 and 2001, 10 prescription drugs were withdrawn from the US market, and eight of the 10 drugs withdrawn posed a greater health risk to women than to men. The factors that contributed to this withdrawal were numerous: some drugs were more frequently used in women than in men, resulting in more frequent risk for adverse effects in women than in men; and some drugs were prescribed as frequently in men as in women, but the adverse effects were more detrimental to women than to men. Epilepsy, in general, is not associated with significant sex-dimorphism. Yet, the incidence of specific epilepsy syndromes is more common in women (e.g., PCDH19, CDKL5) or men (e.g., benign Rolandic epilepsy). Preclinical practice must more frequently integrate sex as a biological variable into the study of seizures, epilepsy, or in support of epilepsy drug discovery.

This workshop provides attendees with an opportunity to better address the potential for differences in seizure outcomes that can be encountered across both sexes, how variations in sex-specific factors differentially impact disease burden, and what pharmacological interventions can reveal about the role of sex differences in epilepsy.

Learning Objectives

Following participation in this activity, participants will be able to:

- Define the potential differences in seizure phenotype or susceptibility between male and female laboratory rodents
- Differentiate between factors that should be addressed when considering sex as a biological variable in research practice
- Implement key principles into one’s own research studies to increase emphasis on biological differences in seizure and epilepsy susceptibility between sexes

Chair: Melissa Barker-Haliski, PhD

Program

Sex Differences in the Neurobiology of Epilepsy: A Pre-clinical Primer | Helen Scharfman, PhD

Technical Insights to Study the Impact of Sex Hormones on Seizures and Epilepsy in Laboratory Rodents | Catherine Christian-Hinman, PhD

Pharmacological Application of Neurosteroids to Modulate Seizure Susceptibility and Presentation in Laboratory Animals | D. Samba Reddy, PhD, RPh, FAES

5:00 – 6:30 PM

Basic Science Skills Workshop | Immune Cells

Music City Center, Room 202 B, Level 2

Overview

Recent discoveries support that microglia, the brain resident immune cells, as well as peripheral immune cells, play critical roles in the pathology of seizures and epilepsy. Immune cells are increasingly recognized as active participants in controlling different aspects of neural function under physiological and pathological conditions, including seizures and epilepsy.

This workshop reviews and discusses different approaches to study microglia and immune cells, including calcium imaging, flowcytometry, cell sorting, and RNA sequencing, as well as it also discusses applications of these techniques to study microglial dynamics in different neurological disorders, including epilepsy. Presenters will discuss how participants can incorporate these approaches and applications in their own research.

Learning Objectives

Following participation in this activity, participants will be able to:

- Recognize and explain selected approaches that can be used to investigate immune cell dynamics
- Apply techniques to question the role of immune cells in their own research

Chairs: Amy Brewster, PhD; and Karen Wilcox, PhD

Program

Microglial Calcium Signaling is Attuned to Neuronal Activity and Seizures | Long-Jun Wu, PhD

Differentiating Brain Resident Cells from Peripherally Infiltrating Immune Cells During Neuroinflammation | Ana Beatriz DePaula-Silva, PhD

Modeling B and T cell interactions in the CNS | Jorge Ivan Alvarez, PhD

5:30 – 8:00 PM

Special Lecture | Dobbs v. Jackson: Impact on Reproductive Health in Epilepsy

Music City Center, Karl F. Dean Ballroom A1, Level 4



Overview

The outcome of the Dobbs v. Jackson case has a significant impact on the care and management of reproductive health across the age and gender spectrum in persons with epilepsy, particularly persons of gestational capacity (PGC) with epilepsy. Due to decreased access to various pregnancy termination options for patients and potential future restrictions on contraception access, it is incumbent on epilepsy providers to be aware of how decision-making regarding medication management and epilepsy care can disproportionately affect patients.

This symposium begins with an expert obstetrician discussing reproductive health among PGC with epilepsy, followed by a review of the Dobbs v. Jackson case and differential abortion rights across the States. Interactions between commonly used anti-seizure medications (ASM) and variable methods of contraception are reviewed. Presenters also discuss implications of in utero ASM exposure including potential increased teratogenicity and adverse perinatal and cognitive outcomes in children born to PGC with epilepsy.

Learning Objectives

Following participation in this activity, participants will be able to:

- Review the impact of the Dobbs v. Jackson court ruling on reproductive healthcare at the national and state level
- Discuss the pharmacologic considerations of ASMs in conjunction with contraception, pregnancy pharmacokinetics, and teratogenicity
- Recognize how a diagnosis of epilepsy impacts reproductive planning for patients
- Consider how the Dobbs v. Jackson ruling affects perinatal counseling for a fetus with genetic or CNS anomalies highly associated with epilepsy, and assess the reproductive health needs in the pediatric epilepsy population

Program | Friday, December 2

- Realize the specific reproductive healthcare issues for people with epilepsy from diverse racial and ethnic backgrounds

Chairs: Alison Pack, MD, MPH, FAES; and Sarah Weatherspoon, MD

Program

Introduction | Alison Pack, MD, MPH, FAES

Abortion and Epilepsy: Pre and Post Roe v. Wade | Anne Davis, MD, MPH

Pharmacology of Anti-seizure Medications and Contraception: What Every Neurologist Needs to Know | Alison Pack, MD, MPH, FAES

The Teratogenic Risks of Anti-seizure Medications: From Malformations to Cognitive Development | Mark Keezer, MDCM, PhD, FAES

Child Neurology and Dobbs v. Jackson: Considerations for Care Across the Pediatric Age Spectrum | Sarah Weatherspoon, MD

The Impact of Post Roe v. Wade on Reproductive Health Access for Women of Color | Deepti Zutshi, MD

Panel Discussion | All Faculty

Education Credit:

2.5 CME

At the time of printing this program, the application for nursing and pharmacy CE credits had been submitted and was pending approval from the Office of Interprofessional Continuing Professional Development. Please refer to aesnet.org/AES2022-accredited for a complete list of accredited sessions.

6:00–7:30 PM

SIG | Cognitive and Behavioral Treatment for Epilepsy: Disparities in Cognitive Behavioral Therapy

Music City Center, Room 204, Level 2



Overview

This session addresses the problem of disparities in access to and engagement in Cognitive and Behavioral Therapy (CBT) among racial/ethnic minority people with epilepsy. It reviews the research regarding barriers to participation, including personal, cultural, and socioeconomic factors, and also shares strategies that providers can use to address these barriers and engage patients in CBT.

Learning Objectives

Following participation in this activity, participants will be able to:

- Identify barriers to African American populations participating in CBT and strategies to overcome them

- Identify barriers to Hispanic populations participating in CBT and strategies to overcome them
- Name mental health self-management resources available that are culturally/linguistically appropriate for racial/ethnic minority populations

SIG Coordinators: Jason A.D. Smith, PhD, ABPP; Tanya Spruill, PhD; and Hillary M. Kimbley, PhD

Chairs: Jason A.D. Smith, PhD, ABPP; and Tanya Spruill, PhD

Program

Disparities in CBT: Identifying and Overcoming Barriers to Participation Among Racial/Ethnic Minority Populations | Hillary M. Kimbley, PhD

Disparities in CBT in African American People With Epilepsy | Rakale Collins Quarells, PhD

Disparities in CBT in Hispanic People With Epilepsy | Andrea Lowden, MD

Education Credit:

1.5 CME

At the time of printing this program, the application for nursing and pharmacy CE credits had been submitted and was pending approval from the Office of Interprofessional Continuing Professional Development. Please refer to aesnet.org/AES2022-accredited for a complete list of accredited sessions.

6:00–7:30 PM

SIG | Critical Care Epilepsy: Status Epilepticus Management — Beyond Anti-seizure Medications and Anesthetics

Music City Center, Room 105 A, Level 1



Overview

Refractory Status Epilepticus (RSE) is common and few data are available to guide management. We often treat RSE with anti-seizure medications and anesthetics, but in some patients RSE persists despite these approaches. Subsequent management is often variable. Recent data are available to guide some of these approaches, including immunomodulatory therapies, neuromodulation, and dietary therapies. The implementation of non-pharmacological treatments in the critical care settings poses unique challenges to the epilepsy and critical care teams.

This session showcases national and international experts with expertise in these approaches, who inform the audience's knowledge of these therapies, in addition to providing practical guidance for implementation of these therapies.

Prior to the expert talks, we feature a data blitz: oral presentations from junior investigators of three abstracts in the field of critical care epilepsy / electroencephalography (EEG) accepted to this year's scientific program.

Learning Objectives

Following participation in this activity, participants will be able to:

- Describe the evidence base and practical considerations in using dietary therapies for RSE management
- Describe the evidence base for the use of neuromodulation for RSE management, as well as broad principles of choosing appropriate neuromodulation parameters
- Identify appropriate scenarios for initiating early immunotherapy for patients in RSE

SIG Coordinators: Hiba Haider, MD, FACNS, FAES; Nicholas Abend, MD, FACNS, FAES; and Adriana C. Bermeo-Ovalle, MD

Chairs: Hiba Haider, MD, FACNS, FAES ; and Nicholas Abend, MD, FACNS, FAES

Program

Presentation of Highly Rated Abstracts Related to Critical Care |

Disparities in Morbidity and Mortality in Adults with Status Epilepticus in the USA: 2010–2019 | Gabriella Tantillo, MD, MPH

In-ICU and Post-ICU Complications in Patients with Status Epilepticus and Their Impact on Outcome | Charlotte Damien, MD

Duration of Status Epilepticus Determines Development of Peri-Ictal MRI Abnormalities | Pilar Bosque Varela, MD

Use of Dietary Therapies in the Management of Refractory Status Epilepticus | Mackenzie Cervenka, MD

Use of Neuromodulation in the Management of Refractory Status Epilepticus | Kristl Vonck, MD, PhD, FEAN

Use of Immunotherapy in the Management of Refractory Status Epilepticus | Stephen Vanhaerents, MD

Education Credit:

1.5 CME

At the time of printing this program, the application for nursing and pharmacy CE credits had been submitted and was pending approval from the Office of Interprofessional Continuing Professional Development. Please refer to aesnet.org/AES2022-accredited for a complete list of accredited sessions.

6:00–7:30 PM

SIG | Magnetoencephalography (MEG): From Spikes to Seizures to Networks — Magnetoencephalography in Focal Epilepsy

Music City Center, Room 208 A, Level 2



Overview

Magnetoencephalography (MEG) is an integral diagnostic study in the presurgical epilepsy evaluation. Most commonly, MEG is an “interictal” study and localizes sources of interictal epileptiform activity. However, seizures occur in approximately 15%-25% of MEG studies and the source analysis of ictal activity in MEG can provide useful information with respect to the seizure onset zone (SOZ). Furthermore, advanced analysis methods, beyond the conventional equivalent current dipole (ECD), using connectivity-based network analysis may better define epileptic networks.

This SIG addresses this issue / problem by reviewing the evidence of MEG in a wide variety of focal epilepsies and then discusses the utility of seizures recorded during MEG. “Ictal MEG” will be outlined with an evidence-based review followed by a debate on the utility. Finally, clinical research updates regarding source localization with MEG provide “future” methods for source analysis in the epilepsy presurgical evaluation.

Learning Objectives

Following participation in this activity, participants will be able to:

- Describe which patients should be referred for MEG in the epilepsy presurgical evaluation
- Explain how MEG may identify lesions in non-lesional cases
- Discuss the practicality of seizures during a MEG study
- Review what techniques can be used to outline epileptic networks with MEG
- Expand on how well network analysis with MEG can detect the seizure onset zone

SIG Coordinators: Andrew Zillgitt, DO, FAES; Jeffrey Tenney, MD, PhD, FACNS; and Ismail Mohamed, MD, FAES

Chairs: Andrew Zillgitt, DO, FAES; and Jeffrey Tenney, MD, PhD, FACNS

Program

Interictal MEG: 10 Common Evidence-supported Indications for MEG in Epilepsy Surgery | Anto Bagic, MD, PhD, FACNS, FAES

Ictal MEG: Is it Practical, and Useful, for Localizing the SOZ? | Ismail Mohamed, MD, FAES; and Wenbo Zhang, MD, PhD, FAES

Program | Friday, December 2

Beyond the Spikes: How Network Analysis Expands MEG's Utility in Localizing the SOZ | Hisako Fujiwara, PhD

Education Credit:

1.5 CME

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6:00 – 9:00 PM

Industry Satellite Symposia

Music City Center

See page 115 for details and locations.

Epilepsy and Clinical Neurophysiology Fellowship Match

AES is pleased to be the official sponsor of the epilepsy and clinical neurophysiology match, with the support of the American Clinical Neurophysiology Society (ACNS).

The Match is conducted through the National Residency Matching Program® and the application process is managed through the Electronic Residency Application System®.

Important Dates:

- December 7, 2022 Programs may begin reviewing applications
- February 15, 2023 Match opens
- May 17, 2023 Match lists announced
- July 1, 2024 Fellowships begin
- Fall 2023 2025 fellowship cycle begins

Learn more at aesnet.org/match.



7:00 – 8:30 AM

Professional Development | Career Skills: How to Apply for Early Career Grants: Nuts and Bolts

Music City Center, Room 104 C, Level 1

Overview

Early career grant writing presents the dual challenge of figuring out how to write and submit your first major grant in addition to formulating a great question and research strategy, and there are still significant logistical hurdles that can make it difficult to achieve. Trainees receive varying levels of institutional support and preparation for this process. This session provides a discussion on the practical aspects of seeking early career funding from National Institutes of Health (NIH) and nonprofit Societies (AES and CURE), introducing early career investigators to mechanisms and information on what applying for your first grant looks like outside of having a great research question, and span topics from interacting with program officers, getting feedback, working with institutional grant officers, and timelines. Speakers will provide the perspective of public and private funding bodies, as well as both senior and junior faculty in the areas of clinical research and basic science with experience submitting and reviewing grants.

Learning Objectives

Following participation in this activity, participants will be able to:

- Identify the role of a program officer in grant submission
- Define the team members within their institution necessary to facilitate successful grant submission
- Prepare for institution-specific challenges to finally submit your grant

Chairs: Christa Habela, MD, PhD; and Joaquin Lugo, PhD, FAES

Program

How to Work with Your Program Director: NIH |
Vicky Whittemore, PhD

How to Work with Your Program Director: Foundations |
William Stacey, MD, PhD, FAES

How to Get Feedback on your Grant |
Gregory Bergey, MD, FAAN, FANA, FAES

How to Work with Your Institution to Submit a Grant: Clinical | Emily Johnson, MD, FAES

How to Work with Your Institution to Submit a Grant: Basic Science | Louis Dang, MD, PhD

7:00 – 8:30 AM

SIG | Children's Hour: Pushing Boundaries: Epilepsy Surgery in Infants and Young Children

Music City Center, Room 106 B, Level 1



Overview

Epilepsy surgery in the very young population (children younger than two years of age) introduces unique challenges compared to older children and adults. Bland symptomatology in infants and the inability to describe auras or ictal sensations in children, produce an incomplete semiology to guide surgical planning. Limitations in development and anatomy may compromise localization of the epileptogenic zone with traditional neuroimaging methods. And finally, the size of the patient themselves affects decisions for sEEG coverage and surgical decision-making.

This Children's Hour SIG consists of a moderated panel, with each speaker exploring a common barrier and illustrating a case that highlights how a creative approach was both successful and safe. First, while pediatric anatomy may limit sEEG coverage, expansive sampling is possible and, in some cases, necessary. Second, advanced imaging and neurophysiology techniques may effectively visualize an epileptogenic zone or identify critical nodes as potential targets. And third, repeated "smaller" surgeries may be favored over a single "big" intervention in specific situations during this developmentally critical period. The discussion period focuses on how to apply these techniques in individual patients.

Learning Objectives

Following participation in this activity, participants will be able to:

- Outline limitations on coverage and potential complications of sEEG in infants and children younger than two years of age
- Update advances in non-invasive and invasive methods to localize seizure onset in non-lesional epilepsy and distinguish between potential epileptogenic foci in multi-lesional epilepsy
- Assess modifiable and non-modifiable obstacles in surgically treating epilepsy specific to the very young population

SIG Coordinators: Rohini Coorg, MD; Jurriaan M. Peters, MD, PhD, FACNS, FAES; and Ittai Bushlin, MD, PhD

Chair: Rohini Coorg, MD

Program | Saturday, December 3

Program

Key Aspects of sEEG Coverage in Infants and Young Children | Elaine S. Seto, MD, PhD

Visualization Techniques to Identify New Surgical Targets in the Very Young Population | Jurrian M. Peters, MD, PhD, FACNS, FAES

Perceived Barriers to Epilepsy Surgery in Infants and Young Children: Identifying and Removing Misconceptions | Jeffrey P. Blount, MD, FAANS, MPH

Education Credit:

1.5 CME

At the time of printing this program, the application for nursing and pharmacy CE credits had been submitted and was pending approval from the Office of Interprofessional Continuing Professional Development. Please refer to aesnet.org/AES2022-accredited for a complete list of accredited sessions.

7:00 – 8:30 AM

SIG | Data Science in Epilepsy: Open Data Ecosystems — Language, Tools, and Pipelines for Open Science in Epilepsy

Music City Center, Room 204, Level 2



CME

Overview

As epilepsy becomes an increasingly collaborative and data-driven field, there is a need to make data more accessible and reproducible in epilepsy. The National Institutes of Health (NIH) and Brain Initiative have created guidelines to help enable data sharing and open data science in neurology and neuroscience. To advance the AES community toward developing an open data ecosystem for epilepsy research, this session discusses solutions towards requirements for data sharing and reuse, use of common languages and formats, data standardization, and other prerequisites for open data science in epilepsy. This is a particularly important topic to address in order to enhance reproducibility and collaboration in epilepsy research.

The session includes five speakers followed by a moderated panel discussion. The speakers introduce the FAIR (Findability, Accessibility, Interoperability, and Reuse of digital assets) Data Principles and NIH guidelines for data sharing / reuse and access; and speak on obstacles that have arisen related to issues, including data sharing / reuse, development of a common language and common data formats, data standardization, and reproducibility.

Several representative data repositories are discussed as examples, including wearable sensors, scalp electroencephalography (EEG), intracranial EEG, subscalp EEG, and neurophysiology. Strategies toward moving toward an open data ecosystem in epilepsy are also discussed.

Learning Objectives

Following participation in this activity, participants will be able to:

- Explain the benefits of data sharing
- Define the FAIR Data Principles for enhancing findability, accessibility, interoperability, and reusability
- Describe issues / obstacles and ethical challenges related to data sharing and reuse
- List types of repositories and be able to critically evaluate scopes and policies
- Describe the data reuse, sharing, and access policies from the NIH

SIG Coordinators: Gregory A. Worrell, MD, PhD; Sharon Chiang, MD, PhD; and Ankit Khambhati, PhD

Chairs: Gregory Worrell, MD, PhD; and Sharon Chiang, MD, PhD

Program

The Importance of Data Sharing in Epilepsy: NIH Guidelines and the BRAIN Initiative | Ankit Khambhati, PhD

Developing an Open Data Platform and Data Reproducibility for Scalp EEG | Dang K. Nguyen, MD, PhD

Neurodata Without Borders: Developing a Common Language and Pipeline for Neurophysiology Data | Kristofer E. Bouchard, PhD

Better Together: Using Cloud Platforms for Federated Biomarker Discovery | Brittany H. Scheid, BS

Data Curation and Standards for Data Reproducibility with Wearable Sensors, Subscalp EEG, and Intracranial EEG | Benjamin Brinkmann, PhD

Panel Discussion | All

Session Conclusion | Sharon Chiang, MD, PhD

Education Credit:

1.5 CME

At the time of printing this program, the application for nursing and pharmacy CE credits had been submitted and was pending approval from the Office of Interprofessional Continuing Professional Development. Please refer to aesnet.org/AES2022-accredited for a complete list of accredited sessions.

7:00–8:30 AM

SIG | Genetics: Prophecy or Empiricity? Clinical Value of Predicting Versus Determining Genetic Variant Dysfunction

Music City Center, Room 105 A, Level 1



Overview

There is a large amount of genetic variation with unclear clinical significance, and historical functional assessment tools are unable to keep up in functional characterization. Yet, deep knowledge about the functional consequences of genetic variation is now relevant not only for understanding epilepsy etiology and for counseling, but it has gained additional importance for targeted therapies. It is increasingly important to classify variants beyond their pathogenicity scale as decisions about targeted therapies demand information about the direction of functional impact.

This Genetics SIG is presented in a traditional interactive debate format brings together experts in bioinformatics and functional modeling to debate new approaches used in the functional assessment of genetic variants. The experts discuss individual methods (in silico approaches, traditional and high-throughput biological systems, the role of Induced Pluripotent Stem Cells (iPSCs) and organoids) and debate their strengths, limitations, relevance for clinical practice, and vision for the future.

Learning Objectives

Following participation in this activity, participants will be able to:

- Describe main pitfalls in interpreting variants of unclear clinical significance
- Describe the importance of deep understanding of functional impact of genetic variants for diagnostics and treatment
- Describe historical approaches used to define functional consequences of genetic variation
- Describe the power and pitfalls of bioinformatic evaluation of functional properties of genetic variants, as well as new and emerging biological platforms used in the evaluation of functional properties of genetic variants

SIG Coordinators: Alica M. Goldman, MD, PhD, FAES; Dennis Lal, PhD, MS; and Erin Heinzen, PharmD, PhD

Chair: Alica M. Goldman, MD, PhD, FAES

Program

Bioinformatics – Scalable Platform for Functional Assessment of Genetic Variants in Epilepsy |

Andreas B. Brunklaus, MD

Biological Model Systems – A Gold Standard Approach to Functional Assessment of Genetic Variants |

Alfred L. George, MD

Education Credit:

1.5 CME

At the time of printing this program, the application for nursing and pharmacy CE credits had been submitted and was pending approval from the Office of Interprofessional Continuing Professional Development. Please refer to aesnet.org/AES2022-accredited for a complete list of accredited sessions.

7:00–8:30 AM

SIG | Neuroimaging: Imaging of Cognitive Reorganization in Epilepsy

Music City Center, Room 104 A, Level 1



Overview

One of the most remarkable characteristics of the human brain is its ability to reorganize in response to injury, and this is frequently observed in patients with chronic epilepsy. This “injury” includes both early life insults (e.g., repetitive seizures), which can disrupt typical patterns of brain organization during development. Or late events, such as surgical insults, which can promote reorganization of cognitive networks post-operatively.

This SIG covers new evidence from functional neuroimaging of both pre- and post-operative reorganization of language and memory in both children and adults with epilepsy. It also covers how compensatory brain mechanisms can be leveraged to enable successful cognitive performance. Finally, we describe how bilingualism and other sociocultural characteristics may influence cognitive reorganization and/or provide a means of cognitive reserve in patients with epilepsy. The SIG format uses a moderated panel of experts and includes both junior and senior investigators.

Learning Objectives

Following participation in this activity, participants will be able to:

- Describe different patterns of cognitive reorganization in epilepsy
- Evaluate differences in memory and language reorganization in children vs adults with epilepsy
- Explain how different sociocultural influences may influence cognitive performances and brain reorganization in epilepsy

SIG Coordinators: Carrie R. McDonald, PhD; Leonardo Bonilha, MD, PhD; and Neda Bernasconi, MD, PhD

Chairs: Carrie R. McDonald, PhD; and Leonardo Bonilha, MD, PhD

Program | Saturday, December 3

Program

Introduction to Cognitive Reorganization in Epilepsy: What Does This Mean and How Do We Measure It? | Carrie R. McDonald, PhD

Intrinsic Functional Systems and How Cognition Adapts to Seizures | Joseph Tracy, PhD

Reorganization of Language and Memory Before and After Temporal Lobe Resection | John S. Duncan, MD

Memory Reorganization in Pediatric Epilepsy | Leigh Sepeta, PhD

The Influence of Bilingualism and Other Sociocultural Factors on Brain Reorganization in Epilepsy | Alena Stasenko, PhD

Education Credit:

1.5 CME

At the time of printing this program, the application for nursing and pharmacy CE credits had been submitted and was pending approval from the Office of Interprofessional Continuing Professional Development. Please refer to aesnet.org/AES2022-accredited for a complete list of accredited sessions.

7:00–8:30 AM

SIG | Pregnancy Outcomes: Neurocognitive Outcomes in Adolescents, Fertility, Depression, and Folic Acid Use

Music City Center, Room 202 B, Level 2



Overview

There is often a lag in the practices of epilepsy providers compared to the most updated evidence as it pertains to peripartum issues in women with epilepsy, outcomes of pregnant women with epilepsy (WWE) and their children, and medication recommendations.

This SIG provides information on the fertility considerations, as well as folic acid and its use and effects in these patients during pregnancy. It also discusses how postpartum depression affects neurocognitive outcomes for children of WWE, with new findings being shared by the Maternal Outcomes and Neurodevelopmental Effects of AEDs study and neurocognitive outcomes in adolescent children of WWE per the Kerala registry.

Learning Objectives

Following participation in this activity, participants will be able to:

- Apply information learned about fertility considerations in WWE to their own practice

- Remember the use and effects of folic acid in WWE during pregnancy
- Describe neurocognitive outcomes in adolescent children of WWE

SIG Coordinators: Deepti Zutshi, MD; Sarita Maturu, DO; and Lu Lin, MD, PhD

Chair: Deepti Zutshi, MD

Program

Neurocognitive Outcomes in Adolescent Children of WWE (Kerala Registry) |

Ramshekhar Menon, MBBS, MD, DNB, DM

Post-partum Depression Effects in Neurocognitive Outcomes (MONEAD) | Naymee J. Velez-Ruiz, MD

Fertility Considerations in Women with Epilepsy | Barbara Mostacci, MD, PhD

Folic Acid and Its Use and Effects in WWE During Pregnancy | Håkon Magne Vegrim, MD

Case Presentation: Increasing Seizures During Pregnancy | Deepti Zutshi, MD

Education Credit:

1.5 CME

At the time of printing this program, the application for nursing and pharmacy CE credits had been submitted and was pending approval from the Office of Interprofessional Continuing Professional Development. Please refer to aesnet.org/AES2022-accredited for a complete list of accredited sessions.

7:00–8:30 AM

SIG | Stereoelectroencephalography (sEEG): sEEG Methodology Applied to Temporal Lobe Epilepsies

Music City Center, Karl F. Dean Ballroom A1, Level 4



Overview

sEEG is increasingly used worldwide as the preferred method of intracranial EEG recording in epilepsy presurgical evaluation. sEEG is an established and safe method for interrogating epileptogenic networks in patients with epilepsy. sEEG enables local field potential recordings from deep cortical structures, identifying the epileptogenic zone (EZ) in a three-dimensional manner, and record epileptic activity across multilobar cortical areas.

Temporal lobe epilepsies are the most common surgically-remediable epilepsies that are amenable for stereotaxic explorations using the sEEG methodology.

This session presents different clinically relevant aspects of the sEEG method applied to temporal lobe epilepsies. The speakers take the audience through a progressive journey, starting with basic conceptual aspects, transitioning to the clinical, epileptological nuances of anatomical electroclinical correlations in temporal lobe epilepsy, and finally closing with a practical and controversial presentation related to the different sEEG guided approaches related to temporal epilepsies.

Learning Objectives

Following participation in this activity, participants will be able to:

- Describe common TLE subtypes
- Examine semiologic features of TLE and their link to different TLE networks
- Use non-invasive data to design an effective sEEG implantation in TLE
- Appraise sEEG findings in TLE
- Use sEEG findings to help with surgical decision-making in TLE

SIG Coordinators: Aileen McGonigal, MD, PhD; Jorge A. Gonzalez-Martinez, MD, PhD; and Louis Maillard, MD, PhD

Chair: Aileen McGonigal, MD, PhD

Program

Introduction | Aileen McGonigal, MD, PhD

Network Organization in Temporal Lobe Epilepsies | Patrick Chauvel, MD

What and How to Explore Temporal Epilepsies in the sEEG Methodology | Louis Maillard, MD, PhD

SIG Chair Introduction |

Jorge A. Gonzalez-Martinez, MD, PhD

sEEG Guided Resections in TLE | Guy M. McKhann, MD, FAES

Education Credit:

1.5 CME

8:45 – 11:45 AM

Presidential Symposium | Seizure Semiology: The Jacksonian March to the Present

Music City Center, Room Karl F. Dean Ballroom B1, Level 4

Special Presentations: ILAE President's Update, Fritz E. Dreifuss Award



CME & CE

Overview

Clinical semiology of epileptic seizures is complex and easily misinterpreted. This session reviews past and present descriptions of clinical semiology, correlating semiology findings with neurophysiological and neuroimaging testing.

The broader goal of the symposium is to emphasize the utilization of clinical history and observation in diagnosis and understanding of epileptic seizures. John Hughlings-Jackson's ideas on different aspects of epilepsy (which were based on his observation of clinical seizures) will be summarized, and each speaker responds with the modern 2022 perspective of the particular aspect described to highlight the importance of clinical history and observation in the diagnosis and understanding of epileptic seizures.

Learning Objectives

Following participation in this activity, participants will be able to:

- Evaluate the principles of epileptic seizures as related to ictal semiology
- Analyze seizure semiology to localize the region of the brain generating seizures
- Recognize the correlation of seizure semiology in directing and interpreting testing with magnetic resonance imaging (MRI) and electroencephalography (EEG)

Chair: R. Edward Hogan, MD, FAAN, FAES

Program

Part 1: John Hughlings-Jackson's Concepts of Epilepsy, a Viewpoint of the Present Day

Seizure Semiology, John Hughlings-Jackson, and Jacksonian Epilepsy | R. Edward Hogan, MD, FAES

Focal vs. Generalized Epilepsy |

Terence O'Brien, MD, FRACP, FAES, *Fritz E. Dreifuss Award*

The "Dreamy State", John Hughlings-Jackson's Description of TLE | R. Edward Hogan, MD, FAES

Excitation and Inhibition During Temporal Lobe Epileptic Seizures | Hal Blumenfeld, MD, PhD

Neuroimaging of TLE |

Neda Ladbon-Bernasconi, MD, PhD

Part 2: The Importance and Role of Clinical Semiology Today

Semiology in Clinical Trials |

Jacqueline French, MD, FAES

Ideas for Modern Approaches to Exploring and Documenting Semiology and Seizures |

Mark Cook, MD, MBBS, FRACP, FRCP, FAHMS, FAES

Panel Discussion | All Faculty

Education Credit:

2.75 CME

Program | Saturday, December 3

At the time of printing this program, the application for nursing and pharmacy CE credits had been submitted and was pending approval from the Office of Interprofessional Continuing Professional Development. Please refer to aesnet.org/AES2022-accredited for a complete list of accredited sessions.

12:00 – 6:00 PM

Exhibit Hall Open

Music City Center, Hall B, Level 3

12:00 – 6:00 PM

Poster Session 1

Authors Present 12:00 – 2:00 PM

Music City Center, Hall B, Level 3

Overview

Posters are grouped by general topic category at various times throughout the meeting. Poster authors are available for discussion from 12:00 – 2:00 PM. There are three ways to access abstracts presented during this poster session:

1. Download the AES Annual Meeting app to view uploaded ePosters
2. Pick up the guide to poster abstracts, available in the registration area
3. Visit aesnet.org/education/annual-meeting/aes-abstract-search for our searchable abstract database

2:15 – 4:45 PM

Advanced Practice Providers Symposium | Medication Dilemmas: Practical Approaches to Pharmacological Management of Epilepsy

Music City Center, Karl F. Dean Ballroom A1, Level 4



Overview

Anti-seizure medication regimens can become complicated. Practitioners treat individual patients with individual needs. Being familiar with common considerations to take into account when discussing options with patients and their families is both desired and needed by practitioners. This session addresses ways to design and modify regimens based on patient needs, from optimizing anti-seizure medication (ASM) polypharmacy to interactions with medications prescribed for co-morbidities, and safety planning for age-related and in-patient vs out-patient options and concerns. In addition, a patient advocate shares her story of her daughter's journey through many of the topics discussed.

Topics include choosing the first ASM, managing polypharmacy, drug interactions and drugs that can lower seizure threshold, safety planning for in-patient vs out-patient environments and differences between pediatric and adult patients, and how to manage nil per os (NPO) or lost / missed doses following illness. A panel discussion with faculty and the advocate completes the symposium.

Learning Objectives

Following participation in this activity, participants will be able to:

- Implement logical anti-seizure medication regimens
- Educate patients and caregivers on interactions amongst anti-seizure medications and a patient's other medications for co-morbidity management
- Discuss with patients how to address concerns when they are NPO status or lost doses due to acute illness

Chairs: Kelly Conner, PhD, MMS, PA-C; and Tracee Ridley-Pryor, DNP, APRN, PMHNP-BC

Program

Introduction | Tracee Ridley-Pryor, DNP, APRN, PMHNP-BC

Patient Story, Part 1 | Michelle Welborn, PharmD

Choosing the First Anti-Seizure Medication | Elizabeth "Betty" Michael, MS, APRN, PNP

Patient Story, Part 2 | Michelle Welborn, PharmD

Polypharmacy: Is Less More? | Danielle Becker, MD, MS, FAES

Drug Interactions and Medications that Lower Seizure Threshold | Michael Gelfand, MD, PhD

Patient Story, Part 3 | Michelle Welborn, PharmD

Rescue Medications and Seizure Action Plans: Differences Between Clinical Setting and Life Stages | Nancy Auer, MSN, APRN, FNP-BC

Special Situations: Surgery / NPO, Illness, and What To Do When a Dose is Missed | Shivani Bhatnagar, DNP, RN, CPN, CPNP-PC

Patient Story, Part 4 | Michelle Welborn, PharmD

Panel Discussion | All Faculty

Education Credit:

2.5 CME

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2:15–4:30 PM

Platform A: Basic Mechanisms

Location: Music City Center, Room 202 B, Level 2

Moderators: Sara Eyal, PhD; and Cameron Metcalf, PhD

Platform B: Translational Research

Location: Music City Center, Room 205 B, Level 2

Moderators: Lena Nguyen, PhD; and Garnett Smith, MD

Platform C: Neuroimaging

Location: Music City Center, Room 103 B, Level 1

Moderators: Taha Gholipour, MD; and Chengyuan Wu, MD, MEng

There will be two concurrent sessions of selected key scientific abstracts. Authors will present a 10-minute overview of their work followed by a five-minute Q&A session.

See page 38 for full platform listing.

2:15–4:45 PM

Advanced Practice Providers Symposium | Medication Dilemmas: Practical Approaches to Pharmacological Management of Epilepsy

Music City Center, Karl F. Dean Ballroom A1, Level 4

 CME & CE

Overview

Anti-seizure medication regimens can become complicated. Practitioners treat individual patients with individual needs. Being familiar with common considerations to take into account when discussing options with patients and their families is both desired and needed by practitioners. This session addresses ways to design and modify regimens based on patient needs, from optimizing anti-seizure medication (ASM) polypharmacy to interactions with medications prescribed for co-morbidities, and safety planning for age-related and in-patient vs out-patient options and concerns. In addition, a patient advocate shares her story of her daughter's journey through many of the topics discussed.

Topics include choosing the first ASM, managing polypharmacy, drug interactions and drugs that can lower seizure threshold, safety planning for in-patient vs out-patient environments and differences between pediatric and adult patients, and how to manage nil per os (NPO) or lost/missed doses following illness. A panel discussion with faculty and the advocate completes the symposium.

Learning Objectives

Following participation in this activity, participants will be able to:

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- Educate patients and caregivers on interactions amongst anti-seizure medications and a patient's other medications for co-morbidity management
- Discuss with patients how to address concerns when they are NPO status or lost doses due to acute illness

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Patient Story, Part 3 | Michelle Welborn, PharmD

Rescue Medications and Seizure Action Plans: Differences Between Clinical Setting and Life Stages | Nancy Auer, MSN, APRN, FNP-BC

Special Situations: Surgery/NPO, Illness, and What To Do When a Dose is Missed | Shivani Bhatnagar, DNP, RN, CPN, CPNP-PC

Patient Story, Part 4 | Michelle Welborn, PharmD

Panel Discussion | All Faculty

Education Credit:

2.5 CME

At the time of printing this program, the application for nursing and pharmacy CE credits had been submitted and was pending approval from the Office of Interprofessional Continuing Professional Development. Please refer to aesnet.org/AES2022-accredited for a complete list of accredited sessions.



Program | Saturday, December 3

2:15–4:45 PM

Epilepsy Therapies Symposium | New Approaches to Drug Resistant Epilepsy

Music City Center, Karl F. Dean Ballroom B1, Level 4

Special Presentation: J. Kiffin Penry Award for Excellence in Epilepsy Care



Overview

New developments in our understanding of genetics may now be applied to epilepsy surgery and epilepsy co-morbidities. These applications are not yet well understood by the majority of clinicians and this session addresses these shortfalls. Implementing use of newer anti-seizure medications helps address the many patients with refractory epilepsy. Minimally invasive approaches to epilepsy address minimizing adverse effects of epilepsy surgery. Focusing on approaches to multifocal epilepsy addresses the problem for a population that has been difficult to treat by medications or surgery.

The attendees also gain insight on using recently released and impending anti-seizure medications. The attendees will understand minimally invasive approaches to refractory epilepsy, such as laser ablation, electrical stimulation, and focused ultrasound; and approaches and therapies for multifocal-onset intractable epilepsies.

Learning Objectives

Following participation in this activity, participants will be able to:

- Describe new genetic strategies to the surgical management of intractable epilepsies and management of co-morbidities associated with epilepsy
- Apply recently released and impending anti-seizure medications to the treatment of refractory epilepsy
- Implement selection and management of refractory epilepsy patients using minimally invasive approaches to refractory epilepsy, such as laser ablation, electrical stimulation, and focused ultrasound
- Apply approaches and therapies for multifocal-onset intractable epilepsies

Chairs: Dean Naritoku, MD, FAES, FAAN, FANA; and Alica Goldman, MD, PhD, FAES

Program

Introduction | Dean Naritoku, MD, FAES, FAAN, FANA

Impact of Genetics on Surgical Management of Epilepsy | Ingmar Blümcke, MD

Genetic Approaches to Epilepsy Co-morbidities | Danielle Andrade, MD, MSc, FRCPC

New Anti-seizure Medications | David Burdette, MD

Minimally Invasive Approaches to Refractory Epilepsy | Allyson Alexander, MD, PhD

New Approaches for Treatment of Multifocal Epilepsy | Stephan Schuele, MD, MPH, FAES

Panel Discussion | All Faculty

Education Credit:

2.5 CME

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5:30–7:00 PM

Investigators Workshop | Advances of the Lafora Epilepsy Cure Initiative: A Research Pathway to Treat and Cure Other Epilepsies

Music City Center, Room 104 C, Level 1



Overview

The Lafora Epilepsy Cure Initiative (LECI) developed foundational knowledge that they translated into parallel synergistic development of four therapeutic approaches for an invariably refractory and fatal epilepsy syndrome, called Lafora Disease or Lafora Epilepsy. LECI provides documentary evidence that can be used to measure disease progression of an epilepsy syndrome: 1) Early electroencephalography (EEG) biomarkers include disintegration of sleep architecture and breakdown of pro-seizure sleep mechanisms, and 2) EEG-rising polyspike wave indices and a clinical disease progression scale.

This workshop presents the advances in Lafora Epilepsy—the approach; therapeutic treatment modalities; identification of outcome measures; as well as the LECI-led novel placebo-controlled randomized study design. Which measures efficacy and adverse effects of antisense oligonucleotides (ASOs), gene therapy, enzyme based therapies, and small molecules using this documentary evidence as outcome measures to treat Lafora Epilepsy. These advances can establish a research pathway for treating and curing other epilepsy syndromes.

Learning Objectives

Following participation in this activity, participants will be able to:

- Describe state-of-the-art therapies to cure Lafora Epilepsy and possibly other genetic epilepsies
- Describe the challenges surrounding invasive treatments such as intrathecal or intracysternal injection of ASOs, intraventricular / intracerebral injections of antibody-enzyme-fused based therapy, new oral small molecule compounds, and a single lifetime dose of intrathecal or intracysternal gene therapy

- Describe and discuss novel placebo-controlled randomized study design that measures efficacy and adverse effects of therapies using provided clinical and EEG outcome measures
- Discuss how outcome measures and disease progression in control cohort (natural history cohort) is used to assess if a cure is present

Moderators:

Antonio V. Delgado-Escueta, MD, PhD, FAAN, FANA; and José M. Serratosa Fernandez, MD, PhD

Speakers: Berge A. Minassian, MD, CM, FRCP(C); Matthew S. Gentry, PhD; and Maria Machio Castello, MD

Education Credit:

1.5 CME

At the time of printing this program, the application for nursing and pharmacy CE credits had been submitted and was pending approval from the Office of Interprofessional Continuing Professional Development. Please refer to aesnet.org/AES2022-accredited for a complete list of accredited sessions.

5:30 – 7:00 PM

Investigators Workshop | Metabolic Mechanisms of Epilepsy and Related Neurodevelopmental Disorders

Music City Center, Room 209 B, Level 2

Overview

Mechanisms underlying the development of epilepsy have been studied extensively from a structural and circuit-based perspective. Changes in specific circuits and cell types have been associated with epileptogenesis.

Until recently, metabolic mechanisms have not been studied in this context of specific circuits and neuronal function. New technology such as matrix-assisted laser desorption/ionization (MALDI) mass-spectrometry imaging has started to resolve metabolism and brain structure function.

Metabolism is dauntingly complex, comprising all biochemical reactions that occur within living organisms. The pathways that involve degradation of compounds are referred to as catabolism and those leading to synthesis of new molecules correspond to anabolism. These processes are important for bioenergetics, signaling, and biosynthetic functions, and thus, are a cornerstone in health and disease, including epilepsy. However, the alterations in cellular metabolism underlying epilepsy are understudied and incompletely understood. This workshop highlights diverse mechanisms in epilepsy and current cutting edge techniques for studying metabolic mechanisms in epilepsy.

Learning Objectives

Following participation in this activity, participants will be able to:

- Explain how disruptions in energy consumption occur following traumatic brain injury and contribute to circuit dysfunction related to epilepsy (C. Dulla laboratory)
- Discuss how metabolic and transcriptomic signatures are altered in common causes of human focal epilepsy (J. Liu laboratory)
- Explain how glycogen metabolism links cellular metabolism, signaling, and physiology in the healthy and epileptic brain (R. Sun laboratory)

Moderators: Christopher Dulla, PhD; and Judy Liu, MD, PhD

Speakers: Sadi Quinones, BS; Felix Chan, PhD; and Ramon Sun, PhD

5:30 – 7:00 PM

Investigators Workshop | Neuromodulation and Sleep in Epilepsy: Promises and Perils

Music City Center, Room 106 B, Level 1

Overview

Neuromodulation has emerged as a mainstay of therapy in adults and children with medically intractable and inoperable epilepsies. Targets and approaches are evolving across a multitude of invasive (responsive neurostimulation, deep brain stimulation, intracranial electroencephalography [EEG]) and non-invasive (transcranial direct current stimulation) modalities. Despite rapid progress, little is known about how these neuromodulatory approaches can affect roughly one-third of one’s life characterized by sleep and how these effects may, in turn, affect seizures and epileptiform activity.

This workshop focuses on recent translational research into the possible positive (“promises”) and negative (“perils”) effects of neuromodulation and sleep in epilepsy.

Learning Objectives

Following participation in this activity, participants will be able to:

- Explain how sleep can be used advantageously during neurostimulation-induced seizures and acoustic stimulation in pre-surgical evaluation
- Discuss the positive potential of using neurostimulation to simulate sleep to treat status epilepticus
- Examine the evidence for potential sleep disruption from thalamic neuromodulation and how to address this

Moderators: Sandipan Pati, MBBS, MRCPI, FAES; and Marcus NG, MD, FRCP, CSCN (EEG), FACNS, FAES

Speakers: Birgit Frauscher, MD, PhD; Daniel Fabo, MD, PhD; and Rina Zemann, PhD

5:30–7:00 PM

Investigators Workshop | What Can We Learn from Large Animal Models of Epilepsy?

Music City Center, Room 105 A, Level 1

Overview

While rodent and zebrafish models have provided invaluable information about epilepsy mechanisms, they do not mimic all aspects of human brain and cardiovascular physiology. Human-induced pluripotent stem cell neuronal and cardiac models provide direct access to patient cells, but cannot provide organismal information. In contrast, large animal models more accurately model human physiology. In addition, recent technological advances have resulted in the generation of transgenic large animal models of neurological disease.

This workshop will focus on the advantages, and potentially greater translatability, of large animal models over rodent, zebrafish, and induced pluripotent stem cell (iPSC) models. We will also discuss challenges related to genetic manipulation of large animals, USDA requirements for large animal care and use, as well as the increased expense of the research program.

Learning Objectives

Following participation in this activity, participants will be able to:

- Explain how large mammals more accurately model human physiology and life span compared to rodents. They can more completely recapitulate aspects of disease phenotypes and etiology, where endpoints or biomarkers of disease are similar and measurable in both the model and in human disease
- Describe how large animal models of epilepsy can provide translatable mechanisms of epilepsy for novel therapeutic discovery
- Discuss how large animal models of epilepsy provide opportunities for testing novel therapeutics and devices that translate to the clinical setting, informing both the decision to advance a therapeutic candidate to clinical testing and clinical study design

Moderator: Lori L. Isom, PhD, FAES

Speakers: Roberto Ramos-Mondragon, PhD; Charles Akos Szabo, MD, FAES; and Ned Patterson, DVM, PhD, DACVIM

5:30–8:00 PM

Best Practices in Clinical Epilepsy Symposium | Access to Care for the Underserved Managing Epilepsy

Music City Center, Karl F. Dean Ballroom A1, Level 4

Special Presentation: Rebecca Goldberg Kaufman AES Clinical Award in Ethical Neuropsychiatry



Overview

This symposium addresses the paucity of research and clinical data for underserved populations and sheds light on access to care for vulnerable populations managing epilepsy from an interdisciplinary lens. It covers the age spectrum, language barriers, transportation, ethnicity, and geographic factors. Presenters range from a variety of disciplines, including pharmacists, psychologists, physicians, advanced nurse practitioners, and social workers. Topics have either clinical or research integration, and will define social determinants that influence access to care, clinical research, and medication adherence barriers.

Learning Objectives

Following participation in this activity, participants will be able to:

- Define social determinants of care in vulnerable individuals managing epilepsy
- Demonstrate knowledge of access to care, including medication access, transportation, and medication adherence across urban and rural settings
- Describe clinical research focused on healthcare disparities
- List strategies to optimize anti-seizure medication cost for those with payor challenges
- Describe strategies to address vulnerable populations and models of care to be utilized

Chairs: Shanna Guilfoyle, PhD, FAES; and Madona Plueger, MSN, RN, APRN, ACNS-BC, CNRN, FAES

Program

Introduction | Shanna Guilfoyle, PhD, FAES

Patient Story | Jill Waller and Claire Waller

Defining Social Determinants of Care in Vulnerable Individuals with Epilepsy | Lisa Clifford, PhD

Access to Care: Telemedicine, Adherence, and Resources in Rural and Urban Setting | Chris Ryan, MSW, LCSW; and Lindsay Schommer, MSN, APRN

Research on Inclusive EEG Methods and Best Practices for Coarse, Curly, and Dense Hair | Jasmine Kwasa, PhD, Rebecca Goldberg Kaufman AES Clinical Award in Ethical Neuropsychiatry

How to Get Bang for Your Buck with Anti-Seizure Medications Particularly for Those Uninsured (MP) | Jeannine Conway, PharmD

Patient Story | Jill Waller and Claire Waller

Insights and Suggestions for Adopting Models of Care for Women with Epilepsy | Sarita Maturu, DO; and Naymee Velez Ruiz, MD, FAES

Panel Discussion | All Faculty

Education Credit:

2.5 CME

At the time of printing this program, the application for nursing and pharmacy CE credits had been submitted and was pending approval from the Office of Interprofessional Continuing Professional Development. Please refer to aesnet.org/AES2022-accredited for a complete list of accredited sessions.

5:30 – 8:00 PM

Neurosurgery Symposium | Epilepsy Surgery Controversies: A Case-based Discussion

Music City Center, Karl F. Dean Ballroom B1, Level 4



Overview

This symposium focuses on the current state-of-the-art methods and procedures related to epilepsy surgery, including surgical interventions, indications, and outcomes, with a particular attention to the main controversial topics in the field. Controversial topics include the optimal approach for mesial temporal lobe epilepsy, the application of invasive monitoring, or the appropriate method for neuromodulation in generalized epilepsy in the pediatric population.

Learning Objectives

Following participation in this activity, participants will be able to:

- Discuss the different aspects of epilepsy surgery practice, including indications, techniques, and expected results from different approaches addressing similar clinical scenario
- Recognize challenges and controversies related to surgical interventions, the options available, and the advantages and disadvantages of each intervention
- Identify the value of clinical and surgical collaboration, promoting positive patient outcomes and minimizing adverse consequences

Chairs: Jorge Gonzalez-Martinez, MD, PhD; and Guy McKhann, MD, FAES

Program

Introduction | Jorge Gonzalez-Martinez, MD, PhD

Case Presentation 1: Mesial Temporal Lobe Epilepsy | Arka Mallela, MD

Lecture 1: Standard and Selective Temporal Resections | Guy McKhann, MD, FAES

Lecture 2: Laser Interstitial Thermal Therapy (LITT) | Chengyuan Wu, MD, MSBmE

Case Presentation 2: Lesional Neocortical Temporal Lobe Epilepsy | Garrett Banks, MD

Lecture 1: Temporal Resection With and Without Intraoperative Electrocorticography (ECoG) | Mark Richardson, MD

Lecture 2: Temporal Resection Guided by Invasive Monitoring | Brett Youngerman, MD

Case Presentation 3: Medically Intractable Generalized Epilepsy | Hussam Shaker, MD

Lecture 1: Close Loop Responsive Neurostimulation (RNS) | Mark Richardson, MD

Lecture 2: Open Loop Deep Brain Stimulation (DBS) | Arthur Cukiert, MD, PhD

Case Presentation 4: Magnetic Resonance Imaging (MRI) Negative Dominant Perisylvian Epilepsy | Jessica Fesler, MD

Lecture 1: Stereo-electroencephalography (sEEG) Monitoring of Seizure Onset Zone (SOZ) and Brain Mapping | Jorge Gonzalez-Martinez, MD, PhD

Lecture 2: Subdural Electrode Monitoring of SOZ and Brain Mapping | Yemi Damisah, MD, MHSc

Panel Discussion | All Faculty

Education Credit:

2.5 CME

At the time of printing this program, the application for nursing and pharmacy CE credits had been submitted and was pending approval from the Office of Interprofessional Continuing Professional Development. Please refer to aesnet.org/AES2022-accredited for a complete list of accredited sessions.



Program | Sunday, December 4

8:00–8:30 AM

American Epilepsy Society Annual Business Meeting

Omni Nashville Hotel, Legends Ballroom G, Level 2

Open to all AES Members

President, R. Edward Hogan, MD, FAES

8:00 AM–5:00 PM

Scientific Exhibits

Music City Center

See page 114 for locations and other details

8:45 AM–5:15 PM

Annual Course | Epilepsy in the Era of Personalized Medicine

Music City Center, Karl F. Dean Ballroom B1, Level 4



Overview

Epilepsy patients require personalized treatment on an individual level to optimize management of seizures and non-seizure outcomes. The Annual Course addresses personalized management from several different perspectives, including increased knowledge about genetic testing and potential gene modulatory therapies, with a focus on unique populations such as during pregnancy and while undergoing treatment for oncologic processes.

Approaches to several unique epilepsy populations, are presented including genetics, pharmaceutical management, personalized prediction of surgical outcomes, and surgical approaches.

There is a patient story as a thread through the course that addresses genetic testing, medication experience, and surgery.

- The first session focuses on genetics, including ordering genetic testing, understanding results, and gene modulatory therapies
- The second session addresses personalized pharmaceutical management, including newer ASM in pregnancy, oncology patients, and pharmacogenomics
- The third session focuses on preparing for epilepsy surgery, including predicating outcomes and “pre-habilitation”
- The final session addresses personalized approaches to imaging, surgery, and the use of devices

Learning Objectives

Following participation in this activity, participants will be able to:

- Indicate the factors that influence recommendations for genetic testing in an individual patient
- Summarize the ILAE guidelines for treatment of women with epilepsy during pregnancy
- Employ a method to routinely assess persons living with epilepsy for epilepsy surgery to maximize their seizure and non-seizure outcomes

Chairs: Kelly Knupp, MD, MSCS, FAES; and Heather McKee, MD, FAES

Program

Session 1: Genetics and Personalized Medicine

Moderator: Kelly Knupp, MD, MSCS, FAES

8:45 AM Introduction | Kelly Knupp, MD, MSCS, FAES

8:50 AM Patient Story: How Genetic Testing Changed our Life |

Emily Nicoli, MS, CRNP, AGNP-C, ACHPN

8:55 AM Lecture: Who, What, Where, and When of Genetic Testing | Louis Dang, MD

9:15 AM Lecture: Making Sense of Results: Predicting Functional Consequences of Variants |

Dennis Lal, PhD

9:35 AM Lecture: Understanding Gene Modulatory Therapies | Ingo Helbig, MD

9:55 AM Break

Session 2: Personalized Pharmaceutical Management

Moderator: Heather McKee, MD, FAES

10:10 AM Patient Story: Treatment Choices |

Emily Nicoli, MS, CRNP, AGNP-C, ACHPN

10:15 AM Lecture: Preparing the Patient for and Caring Through Pregnancy |

Kimford Meador, MD, FRCPE, FAAN, FAES

10:35 AM Lecture: Pharmacogenomics: Its Role Now and in the Future | Tracy Glauser, MD

10:55 AM Lecture: Managing Epilepsy in Oncology Patients | Jessica Templer, MD

11:15 AM Debate: Polypharmacy to Increase Compliance or Is the Best Medicine, Less Medicine? | Jong Woo Lee, MD, PhD, FAES; and Jaquelyn Bainbridge, PharmD, MSCS, FCCP, FAES

11:35 AM Break for Lunch

Session 3: Personalize Preparation for Surgery

Moderator: Heather McKee, MD, FAES

- 2:00 PM Patient Story: What Outcomes are Important to our Family |**
Emily Nicoli, MS, CRNP, AGNP-C, ACHPN
- 2:05 PM Debate: Important Treatment Outcomes: Seizure Versus Non-seizure Outcomes |**
Cornelia Drees, MD, FAES; and
Sophia Varadkar, MBChB, PhD, BS, MRCPI
- 2:35 PM Lecture: Predicting Individual Cognitive and Mood Outcomes after Epilepsy Surgery |**
Robyn Busch, PhD, FAES
- 2:55 PM Lecture: Pre-habilitation Prior to Surgery |**
Sallie Baxendale, PhD
- 3:15 PM Lecture: Bias in Epilepsy Surgery |**
Shilpa Reddy, MD
- 3:35 PM Break**

Session 4: Personalized Approach to Surgery

Moderator: Kelly Knupp, MD, MSCS, FAES

- 3:50 PM Patient Story: Epilepsy Surgery in Genetic Epilepsy |**
Emily Nicoli, MS, CRNP, AGNP-C, ACHPN
- 3:55 PM Debate: Surgery in Genetic Disorders: To Do or Not To Do? |** Ann Hyslop, MD; and
M. Scott Perry, MD
- 4:25 PM Lecture: Tailored Epilepsy Imaging Strategies |** Irene Wang, PhD
- 4:45 PM Lecture: Personalizing Surgical Approaches and New Tools at Our Disposal |**
Sepehr Sani, MD
- 5:05 PM Lecture: Personalized Use of Devices |**
Taneeta Mindy Ganguly, MD
- 5:15 PM Course Wrap-Up |**
Kelly Knupp, MD, MSCS, FAES

Education Credit:

6.0 CME

At the time of printing this program, the application for nursing and pharmacy CE credits had been submitted and was pending approval from the Office of Interprofessional Continuing Professional Development. Please refer to aesnet.org/AES2022-accredited for a complete list of accredited sessions.

8:45 – 10:15 AM

Investigators Workshop | Cellular Contributions to Epileptiform EEG

Music City Center, Room 106 B, Level 1

Overview

A prominent clinical hallmark of epilepsy is the presence of high amplitude events in EEG recordings. These events include interictal spikes, which are brief (<1 s) and are not accompanied by a behavioral phenotype; and seizures, which are sustained (>10 s) and can produce cognitive and convulsive symptoms. Recently, calcium imaging and microelectrode recordings have made it possible to begin to look at how activity in individual neurons combines to produce these population field potential events. This session focuses on at least three main questions: 1) what do we learn from recordings of neuronal activity about the generation of epileptiform events; 2) what does onset sequence stability tell us about strategies for disrupting seizure; and 3) can the observed relationship between cellular activity and local field potential (LFP)/EEG recordings be used to inform surgical planning.

Learning Objectives

Following participation in this activity, participants will be able to:

- Quantify the salient features of activity in a neuronal network that contribute to increased EEG amplitude. For example, to what extent is EEG amplitude elevated by increased synchrony, increased activity in individual neurons, or recruitment of more neurons?
- Identify whether consistent sequences of neuronal activation lead to epileptiform events
- Characterize differences between recorded spiking patterns and field potential morphology in the ictal wavefront

**Moderators: Kyle P. Lillis, PhD; and
Catherine Schevon, MD, PhD**

**Speakers: Lauren Andresen Lau, PhD;
Sarah Feldt Muldoon, PhD; and Edward M. Merricks, PhD**

8:45 – 10:15 AM

Investigators Workshop | Neurosurgical Treatment of Generalized Epilepsy – Disconnection or Responsive Neuromodulation

Music City Center, Room 209 B, Level 2

Overview

The workshop will address four predominant questions currently being controversially debated: Can seizures be reliably detected from thalamic local field potentials (LFPs)?

Program | Sunday, December 4

Which seizure type is prone to be detected best in the thalamus, likely resulting in the highest therapeutic efficacy for RNS? Can a robust and reliable neurophysiological biomarker for seizure activity be derived from thalamic recordings to trigger effective interictal neurostimulation? And what are the advantages of RNS versus callosotomy or vice versa in refractory generalized epilepsy? With responsive thalamic neurostimulation and two national trials investigating its potential use in adults and adolescents, it is important to review the physiological basis of thalamic connectivity with epileptogenic regions, both on the basis of magnetic resonance imaging (MRI) tractography and neurophysiology, and the clinical outcomes. Evaluating thalamic connectivity and comparing both treatments in terms of biological rationale, risk/benefit ratio, and outcomes, allows for the generation of an algorithm based upon which patients can be selected for these different treatments based on their individual pathophysiology.

Learning Objectives

Following participation in this activity, participants will be able to:

- Establish the neurobiological basis of seizure propagation in the thalamus
- Identify prognostic variables for the efficacy of laser callosotomies and how to assess the degree of necessary disconnection
- Apply an algorithm to choose between responsive neuromodulation and disconnection in refractory generalized epilepsy

Moderators: Peter Warnke, MD, PhD; and James Tao, MD, PhD

Speakers: Robert E. Gross, MD, PhD; Mark Richardson, MD, PhD, FAANS; and Julia Henry, MD

8:45 – 10:15 AM

Investigators Workshop | Omics and Open Discovery: Challenges and Opportunities for Epilepsy Research

Music City Center, Room 105 A, Level 1

Overview

Too often, whole transcriptome data is used to find simply the most differentially expressed gene between disease and healthy state and that becomes the basis for future study. Such drastic elimination of tens of thousands of dimensions to leave a single datapoint represents a catastrophic loss of information. We discuss the proposal that alterations in cell and circuit properties in epilepsy are driven by programmatic changes in gene expression in contrast to a single gene. These widescale, programmatic changes of hundreds or thousands of genes can be broken down into sub-programs that represent unique signal transduction cascades.

In this workshop, we discuss how alterations in signal transduction pathways can be inferred from single cell approaches, and demonstrate how transcriptional Master Regulators can be identified that coordinate signal transduction pathways to drive pathological changes in epilepsy. Speakers highlight examples of transcriptomic analysis where RNA expression profiles from single cells and whole tissue are mined to define altered signal transduction cascades, their master regulator, and how this information is utilized to inform mechanisms behind seizures and epilepsy. We also highlight new imaging tools and the need for spatial correlates that unify selective responses of cells within the brain landscape.

Learning Objectives

Following participation in this activity, participants will be able to:

- Provide a platform for discussing the merits of open discovery approaches to epilepsy research with a focus on generating and testing unexpected hypotheses
- Introduce new ways to handle large multi-omic datasets that provide single cell resolution and targets for validation
- Develop a set of clear objectives for the future use of this technology and where we need to improve to make it more accessible and relevant to disease

Moderators: Avtar Roopra, PhD; and Amy Brooks-Kayal, MD, FAAN, FANA, FAES

Speakers: Shelly J. Russek, PhD; and Olivia Hoffman, PhD Candidate

8:45 – 10:15 AM

Investigators Workshop | Standardizing TMS Language Mapping Protocol in Children: Lessons Learned and Future Directions

Music City Center, Room 104 C, Level 1

Overview

This workshop discusses identifying potential barriers faced by practitioners that are preventing successful mapping of speech and language functions in children, using transcranial magnetic stimulation (TMS) as a robust and practical non-invasive presurgical language mapping tool that is safe and well tolerated by children.

This workshop will discuss the use of TMS. The current best practice guidelines for clinical language mapping derived from a multicenter retrospective chart review are described.

The advantages and challenges that are specific to the pediatric population, as well as how TMS results can be incorporated into the surgical planning, are discussed. The efforts of the pediatric epilepsy community towards further optimizing the TMS language mapping protocol for integration into pediatric neurology and neurosurgery practice are summarized.

Learning Objectives

Following participation in this activity, participants will be able to:

- Understand the fundamentals of pediatric TMS language mapping protocol and become familiar with best practice TMS language mapping guidelines
- Address challenges and advantages of performing TMS language mapping in children with epilepsy or brain tumor
- Appreciate the ongoing efforts to optimize coil design and TMS parameters to improve the accuracy of TMS-derived language maps

Moderators: Shalini Narayana, PhD; and Alexander Rotenberg, MD, PhD

Speakers: Hansel M. Greiner, MD; Fiona M. Baumer, MD; and Ravi Hadimani, PhD

10:00 AM – 4:00 PM

Exhibit Hall

Music City Center, Hall B, Level 3

10:00 AM – 4:00 PM

Poster Session 2

Authors Present 12:00 – 2:00 PM

Music City Center, Hall B, Level 3

Overview

Posters are grouped by general topic category at various times throughout the meeting. Poster authors are available for discussion from 12:00 – 2:00 PM. There are three ways to access abstracts presented during this poster session:

1. Download the AES Annual Meeting app to view uploaded ePosters
2. Pick up the guide to poster abstracts, available in the registration area
3. Visit aesnet.org/abstracts for the searchable abstract database

10:30 AM – 12:00 PM

Investigators Workshop | Extracting Neural Signals from Noise in Electrophysiological Data: Tools and Traps

Music City Center, Room 106 B, Level 1

Overview

How can we confidently isolate neural activity from background noise and artifact? This workshop provides a robust understanding of signal processing do's and don'ts when considering low and high frequency oscillations, single unit recordings, and other signals.

It demonstrates both established and new/emerging techniques to clean and process neural data. It also provides practical approaches and reasonings for the process of extracting neural activity signals out of background noise and during human and animal electrophysiological recordings in epilepsy neuroscience.

This workshop is exciting and timely because of the acceleration of epilepsy electrophysiology (paralleling advances in computer/data science), recent advances in neural signal processing software and open source packages, as well as the imperative need to improve standardization of approaches in computational neuroscience across a landscape of non-standardized datasets.

Learning Objectives

Following participation in this activity, participants will be able to:

- Describe principles of isolating neural oscillations from background (e.g., "aperiodic") noise
- Apply modern advances in signal processing techniques to distill local neuronal activity (e.g., high gamma activity, single units) in in vivo electrophysiology
- Identify approaches and pitfalls of different referencing schemes (e.g., single referential, bipolar, common mean / median)

Moderator: Jonathan K. Kleen, MD, PhD; and Jeremy M. Barry, PhD

Speakers: Andrea Navas-Olive, PhD Candidate, PhD; Thomas Donoghue, PhD; and Dora Hermes, PhD; and Jonathan K. Kleen, MD, PhD

10:30 AM – 12:00 PM

Investigators Workshop | Focused Ultrasound: A Rapidly Growing, New Approach to Epilepsy Treatment

Music City Center, Room 105 A, Level 1

Overview

Focused Ultrasound (FUS) is a rapidly expanding, new form of incisionless and radiation-free treatment for a wide variety of neurologic and psychiatric disorders. It can target deep structures in the brain for either an ablative (high intensity) or neuromodulatory (low intensity) effect, making it a particularly appealing form of treatment for many types of epilepsy.

This workshop reviews the different mechanisms of action of FUS, current clinical trials for ablation and neuromodulation in epilepsy, as well as preclinical, promising trials of using FUS to open the blood brain barrier (BBB) for targeted drug delivery. We discuss expectations for potential patient outcomes with HIFUS and LIFUS and if these may become part of our treatment catalog, as well as barriers and challenges in development of noninvasive neuromodulatory devices in the field of epilepsy.

Program | Sunday, December 4

Learning Objectives

Following participation in this activity, participants will be able to:

- Recognize the two main forms of FUS transcranial acoustic delivery: HIFUS for ablation, and LIFUS for neuromodulation, and their mechanisms of action
- Outline the current FUS clinical trials in epilepsy, and how this new, emerging neurotechnology is advancing in the field.
- Identify the innovative ways FUS is being used to enhance drug delivery to the central nervous system via LIFUS-facilitated opening of the BBB in preclinical trials in epilepsy

Moderator: Ellen J. Bubrick, MD, FAES

Speakers: Lennart Verhagen, PhD; Vibhor Krishna, MD; and Max Wintermark, MD, MAS, MBA

10:30 AM – 12:00 PM

Investigators Workshop | Non-Seizure Outcomes in Developmental and Epileptic Encephalopathies

Music City Center, Room 209 B, Level 2



Overview

Clinically meaningful, validated outcome measures are critical for the development of novel therapeutics. Seizures as a primary outcome may not always be suitable or sufficient for patients with Developmental and Epileptic Encephalopathies (DEEs). This workshop presents an overview of challenges in evaluating outcomes in DEEs, the state of existing and emerging measures and tools appropriate for DEEs, development of new measures and refinement of existing measures to fit patients with DEEs, and highlight patient/caregiver-led research efforts to accelerate urgently needed improvements.

Learning Objectives

Following participation in this activity, participants will be able to:

- Describe the state-of-the-art of existing and emerging non-seizure outcome measures for DEEs and how patient/caregiver-led collaborative efforts can drive innovation and progress
- Discuss complexities of genotype-phenotype correlation and association with seizures and development in heterogeneous DEEs, using SCN8A DEE as an example
- Explain the critical need and complex process for developing robust, validated non-seizure outcome measures for DEEs as new treatments emerge

Moderators: John M. Schreiber, MD, FAES

Speakers: Michael F. Hammer, PhD; Natasha Ludwig, PhD; and Gabrielle Conecker, MPH

Education Credit:

1.5 CME

At the time of printing this program, the application for nursing and pharmacy CE credits had been submitted and was pending approval from the Office of Interprofessional Continuing Professional Development. Please refer to aesnet.org/AES2022-accredited for a complete list of accredited sessions.

10:30 AM – 12:00 PM

Investigators Workshop | The Neurocircuitry of Sudden Unexpected Death in Epilepsy: Insights from CURE Epilepsy-Funded Research

Music City Center, Room 104 C, Level 1

Overview

This workshop reviews knowledge on the neurocircuitry that contributes to SUDEP, including findings on the role of specific brain centers and biological pathways that may underlie this most devastating outcome of epilepsy. The session centers around the following questions/topics: 1) the role of the brainstem and cerebrum and their integration in Sudden Unexpected Death in Epilepsy (SUDEP); 2) novel techniques for studying neural circuitry involved in SUDEP; 3) critical next steps in influencing the neural circuitry underlying SUDEP with the goal of preventing SUDEP; and 4) identification of the areas of greatest opportunity in the field of SUDEP research from the perspective of young investigators.

The panel is comprised of experts in the neurobiology of SUDEP, including young investigators who share findings on network biomarkers, new therapeutic targets, and means to modify these neural circuits to influence SUDEP risk and prevention.

Learning Objectives

Following participation in this activity, participants will be able to:

- Present new knowledge on the neurobiology and neural circuitry of SUDEP
- Learn about novel techniques and technologies to study the neurobiology of SUDEP
- Identify gaps and opportunities for advancing SUDEP research towards preventive strategies

Moderator: Priya Balasubramanian, PhD

Speakers: Nuria Lacuey Lecumberri, MD, PhD; William Nobis, MD, PhD; Kristina A. Simeone, PhD; and Ian Wenker, PhD

12:00 – 1:30 PM

Poster Session | Basic Science Poster Highlights and Lunch

Music City Center, Room 101 C, Level 1

Overview

This session features the most exciting and innovative studies focused on understanding the basic mechanisms of epilepsy and using cutting edge approaches to understand and treat the mechanisms of epilepsy.

Moderator: Christopher Dulla, PhD

Program

See page 33 for full poster listing.

1:30 – 3:00 PM

Investigators Workshop | Inhibitory Plasticity, Ictogenesis, and Epileptogenesis

Music City Center, Room 106 B, Level 1

Overview

Miles and colleagues discovered 20 years ago that in tissue resected to control medically intractable epilepsy, inhibition was compromised in a unique way: the GABAA reversal potential was shifted positive. In the ensuing 20 years, we have been searching for both the mechanism for this shift and an effective solution.

What is the role of displacement of chloride vs transport of chloride in the plasticity of the GABAA reversal potential? What translatable strategies are suggested by the latest findings regarding plasticity of the GABAA reversal potential?

What are the advantages and side effects of transport enhancers and inhibitors? What are the next steps in translation of these findings?

Current work on chloride transporters and the displacement of chloride by immobile anions are discussed in relation to ictogenesis, seizure termination, and epileptogenesis.

Learning Objectives

Following participation in this activity, participants will be able to:

- Discuss newly discovered mechanisms of disinhibition after acute brain injury and chronic epilepsy
- Discuss the latest translational efforts to enhance membranous chloride transport to treat epilepsy
- Summarize the challenges involved in translating basic science findings to clinical treatments

Moderator: Kevin Staley, MD

Speakers: Stephen Moss, PhD; Janet Soul, MD; and Kiernan Normoyle, MD, PhD

1:30 – 3:00 PM

Investigators Workshop | Integration of Brain Network Analysis into the Epilepsy Surgery Clinical Pipeline

Music City Center, Room 104 C, Level 1

Overview

Drug resistant focal epilepsy is a disorder involving widespread brain network alterations. Recently, many groups have reported neuroimaging and electrophysiology network analysis techniques to aid patient selection, localization, and outcome prediction in epilepsy surgery. While these approaches may supplement standard tests to improve care, they are not yet used clinically or for influencing surgical decisions.

When will this change? Which approaches have shown the most promise? What are the barriers to translating them into clinical use? How do we facilitate this transition? We discuss progress, barriers, and next steps regarding the integration of brain network analysis into the presurgical epilepsy pipeline.

Learning Objectives

Following participation in this activity, participants will be able to:

- Describe barriers limiting the integration of network analysis approaches into the epilepsy surgery presurgical pipeline
- Identify examples of recent studies using MRI network connectivity analysis to improve patient selection or outcome prediction in epilepsy surgery
- Cite examples of recent intracranial EEG studies using network connectivity analysis to improve localization or surgical planning

Moderators: Dario J. Englot, MD, PhD, FAES; and Kathryn A. Davis, MD, FAES

Speakers: Victoria L. Morgan, PhD, FAES; Leonardo Bonilha, MD, PhD; Erin Conrad, MD

1:30 – 3:00 PM

Investigators Workshop | Microglia in Seizures, Epilepsy, and Comorbidity: Recent Advances Illuminating Pathogenic Mechanisms

Music City Center, Room 105 A, Level 1

Overview

Microglia are canonical immune cells of the brain, capable of mediating inflammatory responses. Given the wealth of evidence linking inflammation with seizures and epileptogenesis, interrogating the contributions of microglia to these processes is critical.

Program | Sunday, December 4

In addition, it is now clear that microglia play essential roles in brain function independent of their inflammatory properties, many of which are also intimately tied to epilepsy.

Describing novel and traditional methodological approaches, this workshop features discussion from a complementary panel of early and mid-stage researchers, which elucidate diverse microglial contributions to acute seizures, chronic epilepsy, and behavioral co-morbidities in models of epilepsy.

Learning Objectives

Following participation in this activity, participants will be able to:

- Explain the current state-of-the-art methods and their limitations targeting microglia in epilepsy contexts in adult mice
- Gain an up-to-date understanding of inflammatory and non-inflammatory functions of microglia, specifically in disease mechanisms associated with seizures, epilepsy, and co-morbidities
- Recognize the promise of targeting microglia as a complementary strategy to currently existing methods as a novel approach in epilepsy management

Moderators: Nigel Jones, PhD; and Amy Brewster, PhD

Speakers: Ukpong Eyo, PhD; and Katerina Akassoglou, PhD

1:30–3:00 PM

Investigators Workshop | Riding the Wave: Current and Future Contributions of Zebrafish Models to Epilepsy Research

Music City Center, Room 209 B, Level 2



CME

Overview

Zebrafish are now an established model organism used to investigate the neurobiology of epileptic seizures and epilepsy. Fuelled by technological developments in genetic engineering, calcium imaging of neuronal activity, and behavioral recordings that can be performed at large scale, zebrafish are now well-positioned to further contribute to epilepsy research. In this workshop we review the contributions of this model organism to date, detail currently available tools and community resources that harness the specific advantages, and discuss the future ahead for zebrafish in epilepsy research.

Learning Objectives

Following participation in this activity, participants will be able to:

- Critically appraise the relevance of zebrafish models of epilepsy and the experimental strategies with which seizures and seizure susceptibility can be evaluated

- Recognize key tools that are now available for the use of zebrafish in epilepsy research, and discern key advantages and limitations of the model organism in relation to these tools
- Identify key areas of future potential for zebrafish as a model organism in epilepsy research, based on the inherent advantages and disadvantages of the model system

Moderators: Richard Rosch, MD, PhD, MRCPCH; and Annapurna Poduri, MD, MPH

Speakers: Eric Samarut, PhD, MBA; Emre Yaksi, PhD; and Aylin Reid, MD, PhD, FRCPC

Education Credit:

1.5 CME

2:00–4:00 PM

Special Lecture | IOM-NAM 10th Anniversary: Looking Back, Moving Forward – Next Steps on Epilepsy Across the Spectrum

Music City Center, Room 202 B, Level 2

Overview

This year marks the 10-year anniversary of the Institute of Medicine / National Academy of Medicine's 2012 report, *Epilepsy Across the Spectrum*. This session documents and celebrates the impact of the report on the epilepsy community by highlighting successful initiatives implemented as a result of the report's recommendations. The session also assesses and considers opportunities for continued collaboration and identifies potential benefits and barriers to addressing remaining gaps in recommended projects. Faculty discuss ways clinical, scientific, and advocacy leaders and organizations can collaborate to continue advancements in public health, policy, and research.

Learning Objectives

Following participation in this activity, participants will be able to:

- Describe successful initiatives stemming from the *Epilepsy Across the Spectrum* report
- Review remaining gaps and emerging opportunities for collaboration
- Identify ways to engage in public health and research efforts in epilepsy

Chair: Eli Mizrahi, MD, FAES

Program

Introduction | Eli Mizrahi, MD, FAES

The Vision for and Value of Epilepsy Across the Spectrum | Frances Jensen, MD, FACP, FAES

Public Health Impact of Epilepsy: Monitoring Prevalence, Incidence, and Burden of Epilepsy |

Rosemarie Kobau, MPH, MAPP

Improving Healthcare Through Quality Improvement, Education, and Accreditation | Fred A. Lado, MD, PhD

Raising Awareness and Educating People with Epilepsy | Brandy Fureman, PhD

Advancing Health Equity in Epilepsy |

Elizabeth Felton, MD, PhD

Panel Discussion | All Faculty

2:00–4:30 PM

Susan Spencer Symposium | Patient-Centered Research: Over A Decade of Impact on Practice

Music City Center, Karl F. Dean Ballroom A1, Level 4



Overview

Susan S. Spencer, MD, was a past president of the American Epilepsy Society who exemplified the unique role of clinicians committed to care and patient-oriented research. Since Dr. Spencer's untimely death in 2009, an annual fellowship has been offered to foster the development of rising stars in patient-oriented research. For the 12th anniversary of the launch of the fellowship, this session highlights advances made possible through patient-oriented research, provides examples of successful research funded through the fellowship, addresses gaps in understanding the importance of patient-centered research, and discusses the opportunities and strategies required to foster the next generation of talent.

Learning Objectives

Following participation in this activity, participants will be able to:

- Describe the importance of patient-oriented research in epilepsy and the legacy of Dr. Susan Spencer
- Define the opportunities for patient-oriented research through early career funding provided through the Susan Spencer Fellowship
- List opportunities to foster the next generation of patient-centered research talent through action by institutions, mentors, professional societies, and funders

Chairs: Piero Perucca, MD, PhD, FRACP; and Adam Hartman, MD, FAES

Program

Introduction | Piero Perucca, MD, PhD, FRACP

Susan Spencer MD: A Legacy of Patient-oriented Research | Linda Huh, MD; and Piero Perucca, MD, PhD, FRACP

Advancing Epilepsy Care and Understanding Through Patient-oriented Research |

Alice Lam, MD, PhD, FRCPC, FAES; and Colin Josephson, MD, MSc, FRCPC

Strategies for Success of Early Career Clinician-Researchers: A Multistakeholder Panel | Piero Perucca, MD, PhD, FRACP; and Adam Hartman, MD

The Role of an Institution in Creating a Vibrant Training Program | Daniel H. Lowenstein, MD

The Role of a Mentor | Page Pennell, MD, FAES

The Role of a Professional Society |

R. Edward Hogan, MD, FAAN, FAES

What is Next After Early Career Funding |

Adam Hartman, MD, FAES

Panel Discussion | All Faculty

Education Credit:

2.5 CME

At the time of printing this program, the application for nursing and pharmacy CE credits had been submitted and was pending approval from the Office of Interprofessional Continuing Professional Development. Please refer to aesnet.org/AES2022-accredited for a complete list of accredited sessions.

3:15–4:45 PM

Investigators Workshop | Advanced Gene and Cell-Based Therapies to Target General Mechanisms of Epilepsy

Music City Center, Room 104 C, Level 1

Overview

Recent advances in genetic technologies stand to revolutionize the treatment of genetic epilepsies through precision medicine. Gene-targeted and cell-based therapies may also be utilized to target more general mechanisms of epilepsy, potentially providing applicability to a much wider population of patients with epilepsy secondary to various etiologies. This workshop focuses on several of these advanced therapies currently in pre-clinical development. The speakers will highlight their work utilizing antisense oligonucleotides (ASOs), gene therapy, and interneuron transplant strategies to target various general mechanisms of epilepsy.

Learning Objectives

Following participation in this activity, participants will be able to:

- Recognize potential general mechanisms of epilepsy that may be amenable to gene or advanced cell-based therapies
- Compare gene and cell-based therapeutic strategies to target various mechanisms of epilepsy
- Examine potential paths and pitfalls to translating these technologies into clinical use.

Program | Sunday, December 4

Moderators: Julie Ziobro, MD, PhD; and Louis Dang, MD, PhD

Speakers: Sophie Hill, BS; Gabriele Lignani, PhD; and Scott C. Baraban, PhD

3:15–4:45 PM

Investigators Workshop | Diverse Roles of Interneuron Subtypes in Acquired Epilepsies

Music City Center, Room 106 B, Level 1

Overview

This workshop discusses the heterogeneity of GABAergic interneurons in epilepsy and the impact on excitability at the synaptic, network, and circuit levels. Three issues are examined: 1) how do different interneuron subtypes impact neuronal excitability; 2) how are different interneuron subtypes impacted differently in the epilepsies; and 3) which interneuron subtypes contribute to the pathophysiology of the epilepsies.

This discussion evolves the dialog around the role of interneurons in epilepsy and advances our understanding of how the diversity of interneurons contributes to network excitability and the pathophysiology of epilepsies.

Learning Objectives

Following participation in this activity, participants will be able to:

- Provide a forum for a rich discussion surrounding the topic of interneuron diversity and epilepsy
- Showcase research on the diverse interneuron subtypes implicated in the pathophysiology of epilepsies
- Recognize the role of interneuron subtypes, the impact on the microcircuit, and contribution to the pathophysiology of the epilepsies

Moderators: Jamie L. Maguire, PhD; and Viji Santhakumar, PhD

Speakers: Viji Santhakumar, PhD; Megan Wyeth, PhD; and Robert F. Hunt, PhD

3:15–4:45 PM

Investigators Workshop | Iatrogenic Epilepsy and Encephalopathy in Immune Therapies for Cancer

Music City Center, Room 209 B, Level 2



CME

Overview

Immune checkpoint inhibitors (ICI) and chimeric antigen receptor (CAR) T-cell therapy are highly effective treatments for refractory malignancies, but are associated with significant neurological toxicities that are frequently unrecognized by neurologists. If not recognized and treated

appropriately, these immune-mediated complications can be fatal or result in permanent neurologic disability. This workshop addresses challenges in diagnosing and managing patients with neurotoxicity and seizures induced by novel cancer therapies and highlights the research priorities in this field.

Renowned faculty from multidisciplinary teams review the etiology and mechanisms underlying the development of acute cognitive impairment and epilepsy in these immune therapies and discuss management strategies for these conditions.

Learning Objectives

Following participation in this activity, participants will be able to:

- Demonstrate knowledge of the evidence-based data on the clinical manifestations of encephalopathy and electrographic features of seizures in patients receiving novel cancer immunotherapies
- Discuss the scope of existing data on etiology and pathophysiological mechanisms of immune-mediated neurologic toxicities related to the ICI and CAR T-cell therapies and identify the research priorities in this field
- Recognize the instruments for effective strategies for early recognition and management of neurotoxicity in cancer immunotherapies with a focus on the multidisciplinary approach

Moderators: Olga Taraschenko, MD, PhD; and Aline Herlopian, MD

Speakers: Divyanshu Dubey, MBBS; Michael Ruff, MD; and John Probasco, MD, FANA

Education Credit:

1.5 CME

At the time of printing this program, the application for nursing and pharmacy CE credits had been submitted and was pending approval from the Office of Interprofessional Continuing Professional Development. Please refer to aesnet.org/AES2022-accredited for a complete list of accredited sessions.

3:15–4:45 PM

Investigators Workshop | Interaction between Physiological and Pathological Oscillations in Memory

Music City Center, Room 105 A, Level 1



CME

Overview

Memory impairment is the most common cognitive comorbidity in epilepsy patients, but mechanisms are poorly understood. The hippocampal-cortical network is vulnerable to pathological recruitment because of high reciprocal connectivity.

Seizures, interictal epileptiform discharges (IEDs), and pathological ripples easily hijack this network, intermingling with physiological oscillations such as theta, sharp-wave ripples, and spindles to disrupt memory function. Understanding interplay between physiology and pathology will enhance mechanistic insight into hippocampal-neocortical dynamics in memory and strategies for memory therapeutics.

This workshop features investigators across the translational spectrum to understand how physiology and pathology interact to influence memory. We will feature a discussion on challenges of translation from rodent to human models, including the unique opportunities and limitations of recording from the epileptic brain.

Learning Objectives

Following participation in this activity, participants will be able to:

Know the roles that key physiological rhythms (theta, SWRs, and spindles) play in memory from the rodent literature

- Describe recent studies that demonstrate how pathological events (IEDs, p-ripples) interact with physiological oscillations to disrupt memory
- Describe recent studies that demonstrate how hippocampal and cortical SWRs contribute to human episodic memory
- Recognize the challenges of working with intracranial electroencephalography (EEG) data from epilepsy patients

Moderators: Anli A. Liu, MD, MA; and Jennifer N. Gelinas, MD, PhD

Speakers: Jennifer N. Gelinas, MD, PhD; Kareem Zaghloul, MD, PhD; and Ivan Soltesz, PhD

Education Credit:

1.5 CME

5:15–6:15 PM

Poster Session | Broadening Representation, Inclusion, and Diversity by Growing Equity (BRIDGE)

Music City Center, Room 101 C, Level 1

Overview

Please join AES for an hour of learning and networking – plus refreshments! – at this poster session, which spotlights research relating to the needs of underserved populations, along with showcasing the work of accomplished investigators who identify with groups historically under-represented in medicine and research. As a leading provider of early career research funding and continuing education for epilepsy professionals, AES plays an instrumental role in growing a diverse epilepsy workforce and encouraging work that will impact disparities in care for the underserved.

Moderators: Christopher Dulla, PhD; and Farah Lubin, PhD

Program

See page 34 for full poster listing.

6:00–7:30 PM

SIG | Engineering and Neurostimulation: Understanding and Modulating Networks with Multimodal Data and Stimulation

Music City Center, Room 105 A, Level 1

Overview

Incorporating various data sources to better understand and modulate epileptogenic neural networks remains challenging. This session will include speakers with expertise in structural and functional data, computational modeling, and brain stimulation mechanisms.

Resection and brain stimulation are valuable tools that can be used to alter epileptic networks as we seek to improve patient outcomes. With the wide range of technologies available today, it is increasingly important to incorporate multiple data types prior to making treatment decisions. Brain stimulation, in particular, is fraught with uncertainty as mechanisms influencing the effects of electrical stimulation remain unclear.

This session examines how we integrate information about the structure and function of the brain and consider how brain stimulation affects networks in unforeseen ways. Speakers discuss incorporating structural and functional data into the prediction of network dynamics and the wide-ranging impacts of brain stimulation on neuronal networks, and discuss future engineering and neurostimulation applications.

Learning Objectives

Following participation in this activity, participants will be able to:

- Explain how we can better integrate structural and functional data from epileptic networks
- Explore quantitative and modeling approaches to the synthesis of multimodal data sources
- Recognize that electrical stimulation may affect neural networks in unacknowledged and unusual ways

SIG Coordinators: Brian Lundstrom, MD, PhD; Beth A. Lopour, PhD; and Sridevi Sarma, PhD

Chair: Brian Lundstrom, MD, PhD

Program

Optimizing Intracranial EEG Targeting using Neuroimaging Connectomics | Kathryn A. Davis, MD

Computational Analysis of Epileptic Networks: Using Data Science to Improve Patient Treatments | Peter Neal Taylor, PhD

In the Heat of Stimulation: The Curse of Joule | Steven J. Schiff, MD, PhD, FAES

6:00–7:30 PM

SIG | Epidemiology: Beyond Prediction — Can Big Data and Advanced Analytics Catalyze Breakthroughs in Epidemiology?

Music City Center, Room 104 A, Level 1

Overview

Big data based on routinely collected electronic and administrative health records and highly dimensional neurophysiological and genetics data are becoming increasingly common in the medical literature. These studies often vary considerably from conventional epidemiological studies with idiomatic designs and methods that are not always readily apparent to the uninitiated. Complicating matters is that the field is both novel and rapidly evolving, meaning the majority of practicing clinicians have not received formal training on how to systematically determine the validity of these studies.

The session uses a mixed presentation format encompassing the theme 'Beyond Prediction: Can Big Data and Advanced Analytics Catalyze Breakthroughs in Epidemiology?' The first portion of the session is reserved for two trainee investigators, chosen from those abstracts submitted to the annual meeting for the poster sessions, each given seven minutes to present their research on a topic complying with the overall theme. The second portion of the session involves didactic lectures by world leaders in big data. Speakers, known for their research and leadership in this field, present a general overview that teaches attendees how to interpret and critique these unique study designs and a tour de force on what has been done and where the future lies with specific respect to epilepsy.

Learning Objectives

Following participation in this activity, participants will be able to:

- Describe the general design of big data epidemiological studies, unique sources of bias, and advantages and disadvantages to this study design
- Explain how this unique study design and analytic approach has been deployed in epilepsy and future breakthroughs reasonably expected through this methodology

SIG Coordinators: Colin B. Josephson, MD, MSc, FRCPC; Churl-Su Kwon, BSc, MD, MPH, FRSPH; and Leah Blank, MD, MPH

Chair: Colin B. Josephson, MD, MSc, FRCPC

Program

Presentation of Highly Rated Abstracts Related to Epidemiology |

Mortality in Children and Young Adults with Epilepsy – Review of Electronic Health Records at Multiple Centers via the Pediatric Epilepsy Learning Healthcare System | Natasha Basma, MPH

The Contribution of Early Seizures to Post-traumatic Epilepsy: Causal Mediation Analysis in a Nationwide Cohort with Moderate-to-Severe Traumatic Brain Injury from Denmark | Kasper Lolk, PhD candidate

Breaking it Down: What Every Clinician Should Know About Big Data | Spiros Denaxas, PhD

Applying Big Data to Epilepsy: The Past, Present, and Future | Samuel Wiebe, MD, FCAHS

6:00–7:30 PM

SIG | Ictal Semiology: Generators of Seizure Semiology — Localization and Propagation Patterns

Music City Center, Karl F. Dean Ballroom A1, Level 4



Overview

In this session, clinical cases are presented in videos of seizures to illustrate how seizure semiology can be used in the localization of seizure onset and routes of ictal propagation. The panel and the audience are challenged in the detailed examination of seizure semiology with 4-6 cases of typical or unusual seizures.

In addition, clinical responses to cortical stimulation are presented to further elucidate eloquent areas of the brain in relationship to seizure semiology.

The audience examines the seizures and stimulation responses to form hypotheses, and the faculty comments on the material with brief discussion of clinical features. The presenter gives the final explanation based upon neuroimaging, intracranial electroencephalography (EEG) and the surgical outcome. Brief didactic material is delivered for each case. The format of the session is interactive with the main aim to show the audience how to use subjective and observable clinical elements to localize the seizure onset and reconstruct the propagation pattern of the ictal discharge.

Learning Objectives

Following participation in this activity, participants will be able to:

- Recognize how seizure semiology can be used to localize seizure onset
- Discuss ictal propagation pathways through analysis of the sequence of development of different semiologic features
- Recognize the traps and pitfalls in applying seizure semiology for seizure localization

SIG Coordinators: Guadalupe Fernandez-Baca Vaca, MD; Philippe Kahane, MD, PhD; and Hyunmi Kim, MD, PhD, MPH, FAES

Chairs: Guadalupe Fernandez-Baca Vaca, MD; and Philippe Kahane, MD, PhD

Program

Ictal Semiology Case 1 | Laurence Martineau, MD

Ictal Semiology Case 2 | Luisa Londono, MD

Ictal Semiology Case 3 | Victoria San Antonio, MD, PhD

Ictal Semiology Case 4 | Hyunmi Kim, MD, PhD, MPH, FAES

Ictal Semiology Case 5 | Manori Wijayath, MD

Education Credit:

1.5 CME

At the time of printing this program, the application for nursing and pharmacy CE credits had been submitted and was pending approval from the Office of Interprofessional Continuing Professional Development. Please refer to aesnet.org/AES2022-accredited for a complete list of accredited sessions.

6:00 – 7:30 PM

SIG | Neuropharmacology: Anti-Seizure Medication (ASM) Withdrawal — Who, What, and When?

Music City Center, Room 102 A, Level 1

Overview

“How long do I need to be on this medication?”, “When can my child come off this ASM?”, “After surgery, do I need to stay on this med?” These are a few of the most common questions faced by both adult and pediatric epileptologists. Two-thirds of people with epilepsy experience seizure-freedom with optimization of anti-seizure medications. The other third might achieve seizure freedom/significant reduction with further interventions such as resective epilepsy surgery or neuromodulation.

Epileptologists often come across people who experience acute symptomatic seizures after TBI who are discharged from the hospital on anti-seizure medications and have been asked to see the epileptologist to determine if and when to come off of these medications. Another special population are infants who experienced seizures as neonates and are committed to being on ASMs (often fosphenytoin or phenobarbital). Epileptologists are faced with the difficult task of deciding when ASM withdrawal is appropriate or to transition to a newer ASM with safer long-term side effect profiles. There is a newly published (Dec 2021) practice advisory update guideline by the AAN which speaks to the timeliness and importance of this topic.

Using case-based learning, this SIG takes a deep dive into the process of anti-seizure withdrawal in three special patient populations: acute symptomatic / acute TBI patients, post resective surgery / neuromodulation patients, and infants who had neonatal seizures. The speakers will include relevant cases with questions to encourage audience participation during the session, with polling. This enables the assessment of the knowledge level of the audience before and after the session, as well as their knowledge improvement.

Learning Objectives

Following participation in this activity, participants will be able to:

- Identify the clinical scenarios where anti-seizure medication can be withdrawn
- Recognize the eligible patient subgroups and consider prognostic factors for anti-seizure medication withdrawal
- Discuss the timeline and approaches for how to wean from anti-seizure medications

SIG Coordinators: Mindl M. Weingarten, PharmD, BCPPS; Proleta Datta, MD, PhD; and Andrea Calvert, PharmD, BCPPS

Chair: Mindl M. Weingarten, PharmD, BCPPS

Program

Introduction-Chair |

Mindl M. Weingarten, PharmD, BCPPS, FAES

Anti-seizure Medication Withdrawal After Acute Traumatic Brain Injury | Adithya Sivaraju, MD, MHA

Anti-seizure Medication Withdrawal After Resectiv Surgery and Neuromodulation Therapy | David Gloss, MD

Anti-seizure Medication Withdrawal After Neonatal Seizures | Cynthia Toy, PharmD, BCPPS

Faculty Q&A | Mindl M. Weingarten, PharmD, BCPPS, FAES; and Proleta Datta, MD, PhD

6:00 – 7:30 PM

SIG | Practice Management: Navigating Specialized Services in an Epilepsy Program

Music City Center, Room 202 B, Level 2

Overview

Comprehensive epilepsy care requires specialized services beyond anti-seizure medications and a multidisciplinary team beyond the provider. A growing epilepsy program faces challenges in funding and may seek resources both within and outside the institution for care and delivery of these services.

Program | Sunday, December 4

The 2022 Practice Management SIG focuses on topics essential to build and maintain a strong and sustainable epilepsy practice in today's complex and evolving world. Epilepsy is a significant cause of disease burden across the globe, with the estimated proportion of those with active epilepsy being between four and ten per 1,000 people. As the world's population ages and grows, there is an ever-increasing need for quality epilepsy and subspecialty care. The process of building an epilepsy practice can be daunting due to complexities of healthcare systems, access limitations, and the need for multidisciplinary care to deliver treatments to patients and families living with epilepsy.

This session addresses four critical elements of a successful epilepsy program in a practical "How-To" discussion on 1) implementing subspecialty services, 2) utilizing an epilepsy navigator, 3) utilizing a provider as a clinic liaison, and 4) developing a non-epileptic seizure clinic.

Learning Objectives

Following participation in this activity, participants will be able to:

- Recognize the steps to implement subspecialty services within an epilepsy program
- Describe the roles and importance of a navigator and a clinic physician liaison in an epilepsy practice
- Identify how to acquire the basic elements needed to support the development of a non-epileptic seizure clinic, including funding, a supportive culture, and key personnel

SIG Coordinators: Nicholas Beimer, MD; Rani K. Singh, MD; and Meghan Ward, MD

Chair: Nicholas Beimer, MD

Program

Interdependence: A Patient Centered Approach to Building an Epilepsy Program | Dave F. Clarke, MBBS, FAES

The Role of the Epilepsy Navigator: Improving Patient Care and Obtaining Administrative Support | Rajdeep Singh, MD, FACNS

The Epilepsy Clinic Liaison: Improving and Standardizing Processes Across a Large Health System | Meghan Ward, MD

Integrating Treatment for Patients with Non-Epileptic Seizures | Meagan Watson, MPH

6:00 – 7:30 PM

SIG | Status Epilepticus: Focal Status Epilepticus — Therapeutic Approach and Response to Therapy

Music City Center, Room 106 B, Level 1

Overview

Successful clinical trials are well known and their proposed treatment algorithm for convulsive status epilepticus is frequently used for FSE treatment. There are potential valuable lessons that can be learned from failed clinical trials and these can advise therapeutic approaches for refractory cases.

This SIG addresses the complex management approach of focal status epilepticus (FSE), from resolution of epileptic electroencephalography (EEG) patterns to clinical outcomes. Rationale for therapeutic failure is addressed by discussing specific animal models and human studies with focus on their proposed mechanism. The EEG patterns associated with status epilepticus and benefits of rapid EEG systems versus prolonged EEG monitoring, are discussed. Clinical epilepsy treatment, including timing, medication doses, and their route of administration as possible causes for preventable failed therapy, are evaluated via interactive clinical cases.

Learning Objectives

Following participation in this activity, participants will be able to:

- Discuss the pathophysiology of status epilepticus and rationale for treatment response
- Identify EEG patterns associated with response to treatment and predict the outcome in status epilepticus
- Describe lessons learned from clinical trials and potential benefits in refractory cases of status epilepticus

SIG Coordinators: Simona V. Proteasa, MD; Victor Ferastraoaru, MD, FAES; and Sandor Beniczky, MD, PhD, FEAN

Chair: Simona V. Proteasa, MD

Program

Animal Models of Status Epilepticus. Role in Therapy | Fred A. Lado, MD, PhD

Resolution of EEG Patterns Following Status Epilepticus Treatment: Role of Different EEG Monitoring Systems | James F. Castellano, MD, PhD

Lessons Learned from Failed Clinical Trials of Status Epilepticus: Future Directions. | Jaideep Kapur, MD, PhD, FAES

Program | Sunday, December 4

6:00–7:30 PM

SIG | Women's Issues in Epilepsy: Aging, Menopause, and Bone Health in Women with Epilepsy

Music City Center, Room 104 C, Level 1

 CME & CE

Overview

This SIG reviews the current best evidence and expert advice for the care of women with epilepsy undergoing hormonal changes during menopause and their common co-morbid issues with epilepsy, and controlling seizures in women during menopause.

Faculty present on the topic of caring for women with epilepsy around menopause and review best practices for improving bone health, optimizing the choice of anti-seizure drugs, and treating osteoporosis.

Learning Objectives

Following participation in this activity, participants will be able to:

- Describe specific issues in menopausal women with epilepsy, address medications in relation to hormonal changes, and how to best manage seizures with aging
- Address bone health and how to manage osteoporosis in women with epilepsy
- Describe the pros and cons of the hormone replacement therapy

SIG Coordinators: Lilit Mnatsakanyan, MD; Rachael Benson, MD; and Mona Sazgar, MD, FAES

Chairs: Lilit Mnatsakanyan, MD; and Rachel Benson, MD

Program

Women with Epilepsy Around Menopause |
Cynthia Harden, MD

Best Practices for Improving Bone Health, Optimizing the Choice of Anti-seizure Drugs |

Alison M. Pack, MD, MPH, FAES

Education Credit:

1.5 CME

At the time of printing this program, the application for nursing and pharmacy CE credits had been submitted and was pending approval from the Office of Interprofessional Continuing Professional Development. Please refer to aesnet.org/AES2022-accredited for a complete list of accredited sessions.

6:00–9:00 PM

Industry Satellite Symposia

Music City Center

See page 115 for locations and other details

EPILEPSY SELF-MANAGEMENT

AES was awarded a grant from the CDC for *Disrupting Disparities: Documenting and Addressing Gaps in Epilepsy Care Through Healthcare Provider Education and Training*, a project aimed at improving outcomes for underserved people with epilepsy.

In a collaboration with the Dartmouth Coordinating Center for the Managing Epilepsy Well Network, AES is committed to improving clinical and community performance relating to epilepsy, self-management, and social determinants of health by delivering education and evidence-based self-management resources.



Learn how you can use self-management to help your patients manage their daily lives with epilepsy.

Visit aesnet.org/self-management for:

- Self-Management Information and Resources
- Clinical Practice Tools
- Mental Health Resources
- Evidence-based Self-Management Programs

aesnet.org/self-management

SUNDAY

Program | Monday, December 5

7:00–8:30 AM

Other Programming | National Association of Epilepsy Centers (NAEC) Annual Meeting

This meeting is open to NAEC members only. See the AES 2022 mobile app for more information.

7:00–8:30 AM

SIG | Epilepsy Education: Diversity, Equity, and Inclusion in Epilepsy Education

Music City Center, Room 202 B, Level 2

Overview

There is an increasing recognition that elements of diversity, equity, and inclusion (DEI) are intrinsic to every aspect of epilepsy education. Epilepsy training programs are expected to develop curricula in identifying and addressing health disparities, sometimes with significant limitations in local expertise in this field. Educators can also play an important role in addressing inequities in epilepsy education in resource-limited regions, but many opportunities to do this have remained unexplored. Finally, there is a need to develop better ways to recruit, retain, and promote a diverse group of epilepsy learners and educators that are more representative of the patients we serve.

This year's Epilepsy Education SIG brings together a panel of experts in each of these areas so that epilepsy educators can improve their understanding of these topics, and propose solutions to these problems in their own programs and in the broader epilepsy community.

Learning Objectives

Following participation in this activity, participants will be able to:

- Describe the most important considerations in the development of a curriculum to teach learners about health disparities in epilepsy
- Explain how to promote equity in epilepsy education in resource-limited settings with both virtual educational tools and local curriculum development
- Demonstrate an understanding of the core principles in recruitment, retention, and promotion of a diverse workforce in epilepsy education

SIG Coordinators: Jeremy J. Moeller, MD, MSc, FRCPC, FAES; Jay Pathmanathan, MD, PhD, FAES; and Dara V. Albert, DO, MEd

Chairs: Jeremy J. Moeller, MD, MSc, FRCPC, FAES

Program

Developing a Curriculum for Health Disparities in Epilepsy | Camilo Gutierrez, MD, FAES

Educational Equity Through Virtual Education | Dara Albert, DO, MEd

Epilepsy Education in Latin America | Luis Carlos Mayor Romero, MD, FAES, FACNS

Recruiting, Retaining, and Promoting a Diverse Workforce in Epilepsy | Mill Etienne, MD, MPH, FAAN, FAES

7:00–8:30 AM

SIG | Epilepsy Surgery: Neuromodulation — Techniques, Challenges, and Opportunities

Music City Center, Room 102 A, Level 1



Overview

Neuromodulation is a rapidly expanding field. Our knowledge base regarding possible targets for modulation in epilepsy and appropriate surgical candidates is an active area of new development. There are complexities and challenges that need to be recognized related to permanently implanted devices, and more frequently, with multiple devices. It is important to have a multidisciplinary approach and discussion of these issues. This SIG addresses this problem with presentations by experienced practitioners discussing the literature, newly available data, and their personal experiences. We encourage audience participation and dialogue to address different opportunities and solutions to challenges presented with multiple neuromodulation devices.

Learning Objectives

Following participation in this activity, participants will be able to:

- Recall the current knowledge of the pathophysiological basis for neuromodulation in epilepsy
- Describe the opportunity to apply long-term data from responsive neurostimulation to guide potential subsequent surgical intervention
- Apply criteria for best patient selection for anterior nucleus of the thalamus (ANT) deep brain stimulation to optimize outcomes
- Apply the growing body of information on emerging targets for DBS to your clinical practice consideration
- Recognize challenges in surgical planning for neuromodulation and apply strategies to overcome the challenges

SIG Coordinators: Kristen Riley, MD, FACS; Jon Willie, MD, PhD, FAANS; and Chima Oluigbo, MD

Chairs: Kristen Riley, MD, FACS



Program

Pathophysiological Basis for Neuromodulation in Epilepsy | Yemi Damisah, MD, MHSc

ANT DBS: Patient Selection, Technical Considerations, and Outcomes | Jon Willie, MD, PhD, FAANS

RNS: Patient Selection, Use of Long-term Data to Guide Subsequent Surgical Intervention | Bradley C. Lega, MD

Emerging Targets for DBS | Nitin Tandon, MD

Challenges in Surgical Planning for Neuromodulation Procedures: Previous Craniotomies, Pre-existing Devices, Imaging Limitations | Ryder Gwin, MD

Education Credit:

1.5 CME

At the time of printing this program, the application for nursing and pharmacy CE credits had been submitted and was pending approval from the Office of Interprofessional Continuing Professional Development. Please refer to aesnet.org/AES2022-accredited for a complete list of accredited sessions.

7:00–8:30 AM

SIG | Intractable Generalized Epilepsy: Prognosis, Therapies, and Deep Brain Stimulation

Music City Center, Room 105 A, Level 1

Overview

Treatment of generalized epilepsy continues to be challenging with curative options more limited compared to focal epilepsy. This SIG reviews and discusses the current and emerging medical treatments of generalized epilepsy, prognostic factors for response to treatment, and the role of deep brain stimulation (DBS) in generalized epilepsy.

Learning Objectives

Following participation in this activity, participants will be able to:

- Describe prognostic factors and patterns of treatment response to generalized epilepsy
- Describe current and emerging medical therapies used in the treatment of generalized epilepsy
- Describe the principles of DBS, various associated targets, and its role in refractory generalized epilepsy

SIG Coordinators: John F. Fitzgerald, MD; Arpan Patel, MD; and Priyanka Moondra, DO

Chairs: John F. Fitzgerald, MD

Program

Prognostic Factors Predicting Treatment Response in Generalized Epilepsy | Brad K. Kamitaki, MD

Emerging Medical Therapies in the Treatment of Generalized Epilepsy | Scott J. Stevens, MD

DBS and Generalized Epilepsy | Brian Lundstrom, MD, PhD

7:00–8:30 AM

SIG | Neuropsychology: Big Data in Cognition in Epilepsy—Clinical and Research Utility

Music City Center, Room 205 B, Level 2



Overview

Memory and other cognitive deficits impact a substantial proportion of individuals with epilepsy. The extent of cognitive problems differs widely across seizure frequency, seizure type, syndrome, duration, and even age of onset. Given the heterogeneity of epilepsy and disparate cognitive features, big data approaches may help us to elucidate why some individuals with epilepsy have intact cognitive profiles and others have significant cognitive deficits.

This session identifies and explores how big data can provide a mechanism to study large numbers of individuals with epilepsy to better understand risk factors and cognitive phenotypes associated with cognitive difficulties and cognitive changes in epilepsy. Utilizing these big datasets will also advance clinical care and clinical decision making, and enable development of personalized neuropsychological care.

Learning Objectives

Following participation in this activity, participants will be able to:

- Identify collaborative efforts in the US and internationally that are establishing large datasets to understand cognitive outcomes in epilepsy
- Identify barriers and solutions to implement big data in epilepsy and cognition
- Explore recent findings that have enhanced clinical care and decision making, as well as advanced scientific literature in epilepsy using large datasets

SIG Coordinators: Suncica Lah, PhD; Jana E. Jones, PhD, FAES; and Leigh Sepeta, PhD

Chair: Suncica Lah, PhD; and Jana E. Jones, PhD, FAES

Program

Introduction | Suncica Lah, PhD; and Jana E. Jones, PhD, FAES

The PERF Experience in Establishing a Pediatric Epilepsy Surgery Database | Madison Berl, PhD

Program | Monday, December 5

Development and Application of the International Classification of Cognitive Disorders in Epilepsy (IC-CoDE): Big Data in Temporal Lobe Epilepsy | Robyn M. Busch, PhD, FAES

Australian Epilepsy Project: A Nationwide Project | Chris Tailby, PhD

NeuroMapper: Standardizing Brain Mapping and the Challenges of Big Data | David S. Sabsevitz, PhD, ABPP

Future Directions in Big Data in Cognition and Epilepsy: A Panel Discussion | David W. Loring, PhD, FAES

Education Credit:

1.5 CME

At the time of printing this program, the application for nursing and pharmacy CE credits had been submitted and was pending approval from the Office of Interprofessional Continuing Professional Development. Please refer to aesnet.org/AES2022 for a complete list of accredited sessions.

7:00–8:30 AM

SIG | Quality and Safety: Algorithms for Optimizing Epilepsy Surgery—The Present and the Future

Music City Center, Room 104 A, Level 1

Overview

Epilepsy surgery is one of the most effective therapies in our field. As such, epilepsy surgery is a critical component of high quality epilepsy care. Yet the application—from identifying potential candidates for evaluation to choosing a specific surgical intervention to predicting seizure outcomes—is incredibly complex. Furthermore, elements of this process may be overly driven by anecdotal evidence or subjective biases. With medicine's current ability to capture and analyze a wide range of data, our field stands well positioned to make better decisions about epilepsy surgery. To practice this "precision medicine," we need well informed algorithms to optimize patient outcomes. In this session, a panel of experts discusses current algorithms for epilepsy surgery, reviews the strengths and limitations of using algorithms to aid treatment decisions, and outlines future research endeavors to make such algorithms more robust.

Learning Objectives

Following participation in this activity, participants will be able to:

- Describe current algorithms available to inform epilepsy surgery treatment
- Discuss the strengths and optimal applications of epilepsy surgery algorithms
- Demonstrate understanding of what further data and research is needed to further develop algorithms to improve epilepsy surgery decision making

SIG Coordinators: Chloe Hill, MD, MS; Susanna S. O'Kula, MD; and Ammar Kheder, MD, MRCPI

Chair: Chloe Hill, MD, MS

Program

Algorithms and Predicting Seizure Outcomes After Surgery | Lara E. Jehi, MD

A Tool to Determine Candidacy for Epilepsy Surgery | Nathalie Jette, MD, MS, MSc, FRCPC, FAES

An Epilepsy Surgery Treatment Algorithm | Dario J. Englot, MD, PhD, FAES

7:00–8:30 AM

SIG | Seizures in Autoimmune Encephalitis: Focus on Diagnosis and Treatment Trials

Music City Center, Room 104 C, Level 1

 **CME & CE**

Overview

Although anti-NMDA receptor encephalitis (NMDARE) was initially described just over 10 years ago, autoimmune encephalitis (AE) is now recognized as a common cause of encephalitis in children and adults. Particularly as earlier treatment can be associated with improved outcomes, prompt recognition and diagnosis is crucial. This SIG session provides updates on clinical presentation, diagnostic aides, and treatment paradigms to promote early recognition and appropriate management of this increasingly common and treatable disease.

Learning Objectives

Following participation in this activity, participants will be able to:

- Recognize key clinical features of autoimmune encephalitis, with a focus on seizure phenotype
- Examine neuroimaging and EEG characteristics in children and adults with autoimmune encephalitis
- Discuss recently established consensus treatment guidelines, including ongoing treatment trials of novel immunotherapies

SIG Coordinators: Coral Stredny, MD; Deepa Sirsi, MD, FAES; and Claude Steriade, MD, CM
Chairs: Coral Stredny, MD; and Deepa Sirsi, MD, FAES

Program

Conceptual Definitions, Prediction Tools, and Phenotypes of Seizures Secondary to Autoimmune Encephalitis | Claude Steriade, MD, CM

EEG and Neuroimaging Characteristics in Pediatric Autoimmune Encephalitis | Grace Gombolay, MD

Updates on Treatment Consensus and Trials in Anti-NMDA Receptor Encephalitis | Gregory Day, MD



Education Credit:

1.5 CME

At the time of printing this program, the application for nursing and pharmacy CE credits had been submitted and was pending approval from the Office of Interprofessional Continuing Professional Development. Please refer to aesnet.org/AES2022-accredited for a complete list of accredited sessions.

7:00–8:30 AM

SIG | Translational Research: Commercializing Academic Research—An Industry Perspective

Music City Center, Room 106 B, Level 1

Overview

Despite multiple new anti-seizure medications (ASMs) and neuromodulation devices being introduced over the last three decades, there has been relative minimal impact on the key treatment gaps for people with epilepsy; in particular, drug-resistant epilepsy, the lack of disease-modifying / anti-epileptogenic medical treatments, and lack of treatments for epilepsy co-morbidities.

Advances in the academic basic and translational research into the neurobiology of epilepsy, epileptogenesis, and ictogenesis have identified multiple opportunities for novel therapeutic approaches that have great potential to address these treatment gaps. Partnering with industry is essential for academics to successfully translate their intellectual property into new therapies for patients. Over the last decade industry has shifted from developing their “in house” research to increasingly partnering with academic researchers to commercialize their intellectual property. However, there is often a mismatch between the academic researchers and industry partners with regard to expectations, timelines, endpoints, outcomes, etc., that impede or limit the successful translation into successful clinical trials, and ultimately, a new treatment.

This SIG consists of presentations from members of biotech industry partnering with academic researchers in the development of new therapeutics (drugs, cellular / genomic therapies, or devices), followed by a panel discussion. The talks and discussion address what industry is looking for in their partnerships with academia, the basics of regulatory issues, intellectual property issues, business plans, targeted product profiles, and other tasks necessary for successful translation of research to therapeutics.

Learning Objectives

Following participation in this activity, participants will be able to:

- Describe what industry is looking for in forming partnerships with academic translational researchers to commercialize their intellectual property, and identify the common areas where there is a mismatch in expectations
- Identify key strategies for academics to form successful partnerships with industry to translate and commercialize their research into new therapies
- Explain how academic researchers and industry can partner with consumers to enhance the success of translational research to address the key treatment gaps for people with epilepsy

SIG Coordinators:

Terence J. O’Brien, MD, FRACP, FAES;
David M. Groppe, PhD; and Ilene Miller, BS, JD

Chair: Terence J. O’Brien, MD, FRACP, FAES

Program

Introduction | Terence J. O’Brien, MD, FRACP, FAES

Development of Gene-based Treatments for Neurological Disorders | Rachel Bailey, PhD

Developing an ASO for Dravet Syndrome | Edward M. Kaye, MD

ANAVEX2-73 for Rett Syndrome | Christopher Missling, PhD

Next Generation Kv7 Openers for Epilepsy | Robin Sherrington, PhD

8:00 AM–2:00 PM

Poster Session 3

Authors Present 12:00–1:45 PM

Music City Center, Hall B, Level 3

This poster session closes promptly at 2:00 PM.

Overview

Posters are grouped by general topic category at various times throughout the meeting. Poster authors are available for discussion from 12:00–1:45 PM.

There are three ways to access abstracts presented during this poster session:

1. Download the AES Annual Meeting app to view uploaded ePosters
2. Pick up the guide to poster abstracts, available in the registration area
3. Visit aesnet.org/abstracts for the searchable abstract database

Program | Monday, December 5

8:00 AM – 5:00 PM

Scientific Exhibits

Music City Center

See page 114 for locations and other details

8:45 – 11:45 AM

Merritt-Putnam Symposium | Recent Insights into Epileptic Networks and Clinical Implications

Special Presentation: Founders Award

Music City Center, Karl F. Dean Ballroom B1, Level 4



Overview

Epilepsy is clearly a network disease, yet the molecular and cellular mechanisms leading to abnormal neuronal networks in epilepsy are not fully understood or recognized. In addition, clearly different types of epilepsy have different abnormal networks and connectome organizations. These still need to be fully characterized and their implications recognized.

The past two years have witnessed major advances in the understanding of the underlying mechanisms of brain networks in epilepsy and of their clinical implications. These advances span the spectrum from cellular, molecular, and animal model studies to connectome studies using novel artificial intelligence analysis methods and cutting edge neuroradiological and neurophysiological data. This symposium is 1) presenting the very recent advances in cellular, molecular and animal model neuroscience that are elucidating these mechanisms, and 2) reviewing the recent studies in patients with various types of epilepsy that have clarified the pathophysiology of various networks in these patients; and discussing their implications on improving the diagnosis, prognostication, and surgical management of patients with epilepsy.

Learning Objectives

Following participation in this activity, participants will be able to:

- Review the cellular and synaptic mechanisms that lead to neuronal synchronization
- Analyze the neocortical, hippocampal, and cerebellar epileptic circuits identified in animal models
- Apply the understanding of human epilepsy networks to the field of epilepsy surgery and patient selection for surgery
- Evaluate the use of artificial intelligence in characterizing human epilepsy networks and their clinical implications

Chair: Mohamad Mikati, MD, FAES

Program

Introduction | Mohamad Mikati, MD, FAES

Neuronal Synchronization in Epilepsy: Cellular and Synaptic Mechanisms | Jeffrey Noebels, MD, PhD, FAES

Epileptic Neuronal Circuits in Epilepsy Animal Models: It is Not Just the Neocortex | Esther Krook-Magnuson, PhD

Identification of Human Epilepsy Networks and Applications in Epilepsy Surgery | Fabrice Bartolomei, MD, PhD

Artificial Intelligence to Characterize Human Epilepsy Networks: Implications on Classification Prognostication | Ezequiel Gleichgerrcht, MD, PhD

Panel Discussion | All Faculty

Education Credit:

3.0 CME

At the time of printing this program, the application for nursing and pharmacy CE credits had been submitted and was pending approval from the Office of Interprofessional Continuing Professional Development. Please refer to aesnet.org/AES2022-accredited for a complete list of accredited sessions.

9:00 – 10:30 AM

Special Lecture | AES-NAEC Joint Coding Session: Coding Reimbursement Policies of Interest to Epileptologists and Epilepsy Centers

Music City Center, Room 106 B, Level 1



Overview

Both public and private insurers will deny coverage and payment for critical services provided by epileptologists and members of the epilepsy center multi-disciplinary team because of inappropriate reporting of Current Procedural Terminology (CPT) codes or lack of documentation or adherence to insurance policies. Guidance on how to report CPT codes for neurophysiology and evaluation and management services and how to meet Medicare and other insurance policy requirements should result in fewer denials and better coverage and payment for services provided.

The session provides an overview of the major neurophysiology CPT codes provided by epileptologists, with a focus on the newer long-term VEEG / EEG monitoring codes. The speakers address implementation issues and frequently asked questions about coding for these services. The session also provides guidance on coding for evaluation and management services, including newer codes for transitional care and chronic disease management. Regulatory changes included in the Medicare Physician Fee Schedule going into effect on January 1, 2023, are explained and instruction provided on how to meet new rules as they relate to the provision of telehealth services and services shared by clinicians and APPs.

Learning Objectives

Following participation in this activity, participants will be able to:

- Describe the coding structure for the major neurophysiology CPT codes and their impact on epilepsy care
- Review evaluation and management coding strategies for epileptologists and epilepsy centers to use for patients seen in both the outpatient and inpatient settings
- Describe regulatory requirements included in the FY 2023 Medicare Physician Fee Schedule final rule, including telehealth services and other policies that will impact patient care

Chair: Susan T. Herman, MD

Program

Introduction | Susan T. Herman, MD

Utilization and Recommendations for Best Practice of EEG/VEEG Monitoring and Other Neurophysiology Codes |

Gregory L. Barkley, MD

Guidance on Optimizing Coding for Evaluation and Management Services in the EMU and Outpatient Clinic |

Marc Nuwer, MD, PhD, FAAN, FACNS, FANA, FAES

Update on 2023 Medicare Payment Rates and Policies Related to Physician and Telehealth Services and Other Insurance Challenges for Epileptologists |

Susan T. Herman, MD

The Implications of CPT Code Relative Values on Physician Salaries | Jonathan C. Edwards, MD, MBA

Panel Discussion | All Faculty

Education Credit:

1.5 CME

At the time of printing this program, the application for nursing and pharmacy CE credits had been submitted and was pending approval from the Office of Interprofessional Continuing Professional Development. Please refer to aesnet.org/AES2022 for a complete list of accredited sessions.

9:00 – 10:30 AM

Special Lecture | ILAE-IBE Session: Moving Forward in Epilepsy Care – Implementation of the Intersectoral Global Action Plan for Epilepsy and Other Neurological Disorders

Music City Center, Room 105 A, Level 1

Overview

In May 2022, the World Health Assembly approved an Intersectoral Global Action Plan (IGAP) for Epilepsy and Other Neurological Disorders.

This was the culmination of many years of joint collaboration between the ILAE, IBE, and World Health Organization, and more recently, the community representing wider neurological disorders.

This commits member states of the WHO to enhancing care of those with epilepsy and other neurological disorders through a series of measures and targets over a 10-year period. The challenge is how to enable member states to meet these objectives, through collaboration with NGOs and others.

This session evaluates the context and how the ILAE and IBE can work together with the WHO and governments to achieve the goals.

Learning Objectives

Following participation in this activity, participants will be able to:

- Review the IGAP and implications for those with epilepsy
- Discuss international initiatives to implement the IGAP
- Recognize funding opportunities in moving toward IGAP objectives

Chairs: J. Helen Cross, MD, MBChB, PhD; and Jaideep Kapur, MD, PhD, FAES

Program

Introduction | Jaideep Kapur, MD, PhD, FAES

The Intersectoral Global Action Plan for Epilepsy and Other Neurological Disorders: What Does it Mean? |

Alla Guekht, MD

IGAP: The Way Forward | J. Helen Cross, MD, MBChB; and Francesca Sofia, PhD

Panel Discussion | All Faculty

9:00 – 10:30 AM

SIG | Dietary Therapies for Epilepsy: Sex-specific Hormonal and Reproductive Considerations

Music City Center, Room 104 A, Level 1

Overview

For decades, gender and sex biases in medical research have resulted in chronic under-representation in trials and a subsequent lack of knowledge on the unique biological and medical needs of women and people with menstrual cycles. The National Institutes of Health and other prominent organizations have called for direct attention to this healthcare disparity through a fair representation of women and other affected minority groups in research and clinical education.

Program | Monday, December 5

This SIG addresses a number of unique considerations related to sex-specific hormonal and reproductive health in dietary therapy for epilepsy, including topics such as pregnancy, pre-pregnancy planning, lactation, catamenial epilepsy, and relevant differences in metabolism and physiology.

Expert speakers provide a review on the current literature, update on recent research, and clinical experience on the topics, with a Q&A panel discussion following the talks.

Learning Objectives

Following participation in this activity, participants will be able to:

- Describe unique considerations surrounding dietary therapy in pregnant and lactating people and implement relevant practical changes based upon the most current evidence
- Describe unique considerations surrounding dietary therapy in catamenial epilepsy and implement relevant practical changes based upon the most current evidence
- Describe the currently available evidence on sex-specific differences in metabolism and physiology that occurs during dietary therapies for epilepsy

SIG Coordinators: Angela M. Poff, PhD; Elizabeth A. Felton, MD, PhD; and Christine Wheeler, MS, RD

Chair: Angela M. Poff, PhD

Program

Dietary Therapy for Epilepsy During Pregnancy and Lactation | Tanya J.W. McDonald, MD, PhD

Updates and Clinical Experience on Dietary Therapy for Catamenial Epilepsy | Kelly Faltersack, MS, RD, LD, CD

Sex-specific Responses to Ketogenic Diet in Animal Models | Susan Masino, PhD

9:00 – 10:30 AM

SIG | Health Disparities: Moving Beyond Talk and into Action

Music City Center, Room 202 B, Level 2

Overview

Over recent years there has been increasing recognition of the ubiquity of health disparities and inequities throughout medicine. The field of epilepsy is not immune, with multiple studies documenting health disparities / inequities based on factors such as race / ethnicity, socio-economic status, insurance status, and English proficiency. These disparities are only beginning to be explored, with most studies focusing on rates of receipt of epilepsy surgery.

While documentation of the extent of health disparities must continue, there needs to be a push towards understanding the underlying factors contributing to these disparities, including systemic (e.g., the absence of a national health insurance system), provider-based (e.g., implicit bias, degree of cultural competency), and patient-based factors (e.g., cultural beliefs, limited health literacy).

This Health Disparities SIG will: 1) raise awareness of the rampant nature of health disparities / inequities in epilepsy, and 2) better understand the specific factors contributing to these disparities in order to design effective interventions.

The session starts with a case presentation (a health disparity “M&M”), followed by speakers providing 1) a brief overview of documented health disparities in epilepsy (moving beyond rates of epilepsy surgery and into topics such as QOL and mortality), 2) our understanding of the underlying factors contributing to these disparities, and 3) examples of successful interventions. The speakers will be followed by an interactive panel discussion of possible interventions that could have prevented the negative case outcome.

Learning Objectives

Following participation in this activity, participants will be able to:

- Describe the ubiquity of health disparities and inequities in the field of epilepsy and the wide range of populations affected
- List some of the underlying factors that lead to these disparities
- Explore and design more effective, targeted interventions to combat these disparities

SIG Coordinators: Karen Skjei, MD, FAES; Camilo Gutierrez, MD, FAES; and Rebecca Garcia Sosa, MD

Chair: Karen Skjei, MD, FAES

Program

Case Presentation | Rebecca Garcia Sosa, MD

Health Disparities in Epilepsy: A Brief Overview | Kavya Rao, MD

A Deeper Dive: Exploring the Factors Underlying Disparities | Karen Skjei, MD, FAES

Health Disparities: Successful Interventions and Future Directions | Connie Taylor, MD

Interactive Panel Discussion: A Health Disparity M&M | All Speakers

9:00 – 10:30 AM

SIG | Neuroendocrinology: Females and Cycling Hormones in Epilepsy — Misconceptions, Methods, Mechanisms

Music City Center, Room 102 A, Level 1

Overview

There is much evidence that neural functions change with the female ovarian cycle (menstrual cycle in humans, estrous cycle in rodents) in ways highly relevant to seizures and epilepsy. However, misconceptions about the cycling hormones have led to hesitancy to incorporate female subjects, particularly in preclinical research. This reluctance hinders knowledge of which facets of seizure activity and susceptibility may change with the cycle and which do not, which may provide insight regarding underlying pathophysiological mechanisms.

This SIG highlights the necessity of inclusion of female animals and discusses preclinical studies demonstrating impacts of estrous cycle stage on excitability and seizure activity in different models of epilepsy.

Collectively, the speakers address the misconceptions and methodological concerns that have impeded incorporation of females and the menstrual / estrous cycle in epilepsy research. Finally, there is a group discussion and debate regarding the best practices for applying strategies to incorporate female subjects, and when and how to assess the cycling hormones in preclinical epilepsy research.

Learning Objectives

Following participation in this activity, participants will be able to:

- Provide examples of epilepsy models in which seizure activity and susceptibility may fluctuate with estrous cycle stage
- Identify sex-specific mechanisms of seizures and epilepsy-associated comorbidities
- Differentiate when examination of estrous cycle stage is imperative in preclinical research using female animals and when it is not necessary

SIG Coordinators: Jamie L. Maguire, PhD; Catherine Christian-Hinman, PhD; and P. Emanuela Voinescu, MD, PhD

Chair: Jamie L. Maguire, PhD

Program

Making Females Practical to Study and Why it is Worthwhile in Epilepsy Research | Helen E. Scharfman, PhD

Estrous Cycle Stage Shapes Susceptibility to Seizures and Treatment Response in Rat Models of Absence Seizures | Patrick A. Forcelli, PhD

Reciprocal Relationships Between the Estrous Cycle and Seizures in a Mouse Model of Temporal Lobe Epilepsy | Catherine Christian-Hinman, PhD; and Cathryn A. Cutia, BS

9:00 – 10:30 AM

SIG | Psychosocial Comorbidities: Autism and Epilepsy: From Theory to Practice

Music City Center, Room 209 B, Level 2



Overview

As much as one third of people with autism spectrum disorder (ASD) also have epilepsy, yet the overlap is not commonly understood or addressed. Diagnoses are often complicated by difficult to determine semiology, and the evidence base for treatment is limited.

This SIG addresses the common clinical co-morbidity of ASD and epilepsy, and suggests practical management strategies from experts.

Speakers address theoretical underpinnings of the co-morbidity, as well as offer practical management strategies to address complex phenomenology and identification of targets for treatment. Time is allotted for discussion and audience participation in order to consider creative management strategies that will be relevant for a wide variety of clinical circumstances.

Learning Objectives

Following participation in this activity, participants will be able to:

- Describe methods to diagnose ASD
- Summarize the types of seizures and epilepsy syndromes that commonly overlap with ASD
- Describe pharmacologic, epilepsy-related, and non-pharmacologic treatment options that may address common manifestations of this co-morbidity

SIG Coordinators: Heidi Munger Clary, MD, MPH; Jay A. Salpekar, MD, FAES; and Elaine T. Kiriakopoulos, MD, MSc

Chair: Heidi Munger Clary, MD, MPH

Program

Theoretical and Neurophysiologic Basis of Autism and Epilepsy | Joshua B. Ewen, MD

Psychological and Behavioral Treatments: Operationalizing ABA Therapy | Mary Wojnaroski, PhD

Nuances of Treating Epilepsy in Persons with Autism Spectrum Disorders Across the Lifespan | Sarah Spence, MD, PhD

Real World Treatment Approaches for ASD and Epilepsy | Jay A. Salpekar, MD, FAES

Panel Moderation | Elaine T. Kiriakopoulos, MD, MSc

Education Credit:

1.5 CME

At the time of printing this program, the application for nursing and pharmacy CE credits had been submitted and was pending approval from the Office of Interprofessional Continuing Professional Development. Please refer to aesnet.org/AES2022 for a complete list of accredited sessions.

Program | Monday, December 5

9:00 – 10:30 AM

SIG | Seizures and Cerebrovascular Disease: Seizures After Stroke — Location, Reperfusion, Risk Stratification, and Biomarkers

Music City Center, Room 205 B, Level 2



Overview

About 6%-8% of adults with ischemic stroke and 15% of adults with intercerebral hemorrhage (ICH) will experience late post-stroke seizures.

It is not well known which patients are at increased risk of late post-stroke epilepsy. We plan to discuss different predictors of post-stroke epilepsy: 1) role of stroke location and reperfusion treatment in development of post-stroke epilepsy; 2) early imaging biomarkers based on magnetic resonance imaging (MRI) and computed tomography (CT) perfusion, as well as electroencephalography (EEG) in identifying risk of post-ICH seizures; 3) role of functional and miRNA-mRNA networks as potential biomarkers for post-ICH late seizures.

Speakers discuss the role of stroke location and reperfusion treatment (including IV or IA thrombolysis and mechanical thrombectomy) in development of post-stroke seizures; early imaging biomarkers based on MRI and CT perfusion, EEG in identifying risk of post-ischemic stroke seizures, and whether the combination of these data streams can help predict post-ischemic stroke I epilepsy; and the role of biomarkers (including the role of functional and miRNA-mRNA networks) to predict which subgroup of patients are at higher risk of developing late seizures after ICH as potential biomarkers for post-ICH late seizures.

Learning Objectives

Following participation in this activity, participants will be able to:

- Describe the role of stroke location and reperfusion treatment in development of post-stroke seizures
- Define early imaging biomarkers based on MRI and CT perfusion, as well as EEG in identifying risk of post-ischemic stroke seizures
- Explain the role of functional and miRNA-mRNA networks as potential biomarkers for post-ICH late seizures

SIG Coordinators: Pegah Afra, MD, FAES; Matthew Mercuri, MD; and Monica Dhakar, MD, FAES
Chairs: Pegah Afra, MD, FAES; and Matthew Mercuri, MD

Program

Seizures After Ischemic Stroke: A Matched Multicenter Study | Carolina Ferreira-Atuesta, MD, MSc

Multi-modal Approach to Post-Ischemic Stroke Epilepsy Risk Stratification | Jennifer Kim, MD, PhD

MicroRNA Regulatory Network as Biomarkers of Late Seizure in Patients with Spontaneous ICH | Ifeanyi Iwuchukwu, MD

Education Credit:

1.5 CME

At the time of printing this program, the application for nursing and pharmacy CE credits had been submitted and was pending approval from the Office of Interprofessional Continuing Professional Development. Please refer to aesnet.org/AES2022-accredited for a complete list of accredited sessions.

9:00 – 10:30 AM

SIG | Temporal Lobe Club: Novel Surgical Therapies

Music City Center, Room 104 C, Level 1



Overview

Novel approaches have been developed to surgically treat temporal lobe epilepsy. The most commonly employed surgical method, resection, still poses an element of risk, significant discomfort, and may lead to memory or language impairment. Moreover, some patients are not candidates for resection because of undue risk or the presence of bilateral temporal lobe epileptogenic zones. These newer methods have the potential to reduce risk and discomfort and have potential to treat patients who are not amenable to therapy with existing surgical methods.

This SIG reviews these newer techniques, discussing new therapies that are currently in use and those under investigation in humans. Topics include implantation of inhibitory neurons in mesial temporal lobe; focused ultrasound, thermal ablation, and radiofrequency ablation methods; neuromodulation with electrical stimulation and ultrasound; and network changes resulting from focal modification of the epileptic network.

Learning Objectives

Following participation in this activity, participants will be able to:

- Describe the principles underlying neuronal transplant therapy for mesial temporal lobe epilepsy
- Discuss indications for ablation techniques in treating temporal lobe epilepsy and select patients for this therapy
- Select candidates for neuromodulation, discuss outcomes, and review the effects of modulation on epileptic networks
- Discuss the effects of ablative and modulation techniques on epileptic networks

SIG Coordinators: Michael R. Sperling, MD, FAES; Julia Jacobs, MD, FAES; and Lara E. Jehi, MD

Chairs: Michael R. Sperling, FAES, MD; and Julia Jacobs, MD, FAES



Program

Ablation Techniques for Temporal Lobe Epilepsy: Interstitial Thermal Ablation, RF Ablation, and Focused Ultrasound | Chengyuan Wu, MD, MS

Neuromodulation for Temporal Lobe Epilepsy: Electrical Stimulation and Focused Ultrasound | Christianne N. Heck, MD, FAES

Neural Implants for Mesial Temporal Lobe Epilepsy | Derek Southwell, MD, PhD

Network Changes with Focal Ablation and Neurostimulation in Temporal Lobe Epilepsy | Julia Scholly, MD, PhD

Education Credit:

1.5 CME

At the time of printing this program, the application for nursing and pharmacy CE credits had been submitted and was pending approval from the Office of Interprofessional Continuing Professional Development. Please refer to aesnet.org/AES2022-accredited for a complete list of accredited sessions.

9:00 – 11:30 AM

Special Lecture | Sleep and Epilepsy Across the Lifespan

Music City Center, Karl F. Dean Ballroom A1, Level 4



Overview

This session highlights the interactions between sleep, circadian rhythms, and epilepsy to especially address how consideration of these interactions positively affects patient care and demonstrate how factors that should be considered and assessed change with age across the lifespan. There are two general problems. The first is that bidirectional interactions between sleep, circadian rhythms, and epilepsy are not always appreciated and considered in the care of patients with epilepsy, and this has a negative impact on patient care and quality of life. The second is that when these factors are considered, how they need to be evaluated and considered for patients of different ages is not often appreciated.

This session begins with a brief introductory talk to provide an overview; five age-related talks, one each on neonates, children, adolescents, adults, and elderly; and a unifying talk covering sleep impact of caring for dependents with epilepsy. It ends with a panel discussion. Each talk is framed by a case representing an age group-specific clinical question, leading to a discussion of the basic science mechanisms and clinical relevance of the question.

Learning Objectives

Following participation in this activity, participants will be able to:

- Review the effects of sleep and circadian rhythms on seizures and epilepsy

- Describe the effects of seizures, epilepsy, and treatments on sleep and wakefulness
- Recognize how the effects of sleep on epilepsy and epilepsy on sleep change with age across the lifespan
- Describe the sleep impact of caring for dependents with epilepsy

Chairs: Gordon Buchanan, MD, PhD, FAES; and Milena Pavlova, MD

Program

Introduction | Gordon Buchanan, MD, PhD, FAES

Development of Sleep-Wake Patterns in Neonates and Interaction with Epilepsy | Renée Shellhaas, MD, MS, FAES

Sleep and Epilepsy in Children | Sanjeev Kothare, MD, FAES

Sleep and Epilepsy in Adolescents | Mark Quigg, MD, MSc, FANA, FAES

Sleep and Epilepsy in Adults | Milena Pavlova, MD

Sleep and Epilepsy in the Elderly | Alice Lam, MD, PhD, FAES

Sleep Impact of Caring for Dependents with Epilepsy | Gita Gupta, MD

Panel Discussion | All Faculty

Education Credit:

2.5 CME

At the time of printing this program, the application for nursing and pharmacy CE credits had been submitted and was pending approval from the Office of Interprofessional Continuing Professional Development. Please refer to aesnet.org/AES2022-accredited for a complete list of accredited sessions.

10:00 AM – 2:00 PM

Exhibit Hall

Music City Center, Hall B, Level 3

2:00 – 3:30 PM

Special Lecture | Lombroso Lecture: The Quest to Unveil Hidden Focal Cortical Dysplasia on MRI

Special Presentations: Basic Science and Clinical Science Research Awards

Music City Center, Karl F. Dean Ballroom B1, Level 4

Overview

High-resolution structural magnetic resonance imaging (MRI) plays a crucial role in defining the etiology and prognosis of medical and surgical treatment in patients with epilepsies.

Program | Monday, December 5

The results from an MRI visual analysis of signal characteristics of a suspect lesion, its location, and extent, with or without post-processing, are fundamental to the surgical approach in patients with focal cortical dysplasias (FCD). However, MRI findings in patients with FCD are often subtle and may be undetected even with state-of-the-art MRIs. The use of artificial intelligence (AI) approaches, including machine learning (ML) and deep learning (DL), can segment and calculate the volume or shape of brain structures on MRI, among other MRI features, with little or no human intervention. Although not yet readily available for clinical practice in most centers, ML and DL have shown great potential for automatic detection of FCD lesions in MRI-negative focal epilepsies.

This lecture addresses the characteristic MRI findings of different forms of FCD in light of the updated ILAE FCD classification, current state-of-the-art imaging, and emerging advanced post-processing and artificial intelligence (AI) methods for automatic detection of FCD.

Learning Objectives

Following participation in this activity, participants will be able to:

- Recognize the complex MRI features of the different forms of FCD
- Review the importance of 3D MRI acquisitions and multiplanar reformatting for patients with suspected FCD
- Identify the concept of advanced post-processing and AI methods for automatic detection of FCD

Program

Basic Science Research Presentation: From Basic Sodium Channel Biology to “There are Patients Waiting” | Lori L. Isom, PhD, FAES

Clinical Research Award Presentation | Gregory A. Worrell, MD, PhD

Lombroso Lecture: What to Do When the MRI is Negative in Focal Pharmacoresistant Epilepsies in Clinical Practice? | Fernando Cendes, MD, PhD, FAAN, FAES

3:15–5:30 PM

Pediatric Epilepsy Highlights

Music City Center, Room 101 C, Level 1

Overview

This session showcases selected scientific abstracts focused on topics in clinical care and research in pediatric epilepsy. Authors present an eight-minute overview of their work. Presentations are chosen from all submitted abstracts. Participants view posters and meet the authors at the end of the program.

Moderators: Sarah Kelley, MD; and Zachary Grinspan, MD, FAES

Program

See page 36 for full poster listing.

4:30–6:30 PM

Special Lecture | Dialogues to Transform Epilepsy: Leveraging Cutting-edge Neuroscience to Improve Epilepsy Therapy

Music City Center, Room 106 B, Level 1

Overview

Dialogues to Transform Epilepsy is a special lecture that brings leaders in cutting-edge neuroscience to the epilepsy research community and transforms how to think about understanding and treating epilepsy. These thought leaders share their exciting research and unique perspectives on how they think about fundamental aspects of brain development, function, and disease.

This session combines two exciting subjects: sex differences and immune cells. It brings together world-renowned scientific experts from outside the field of epilepsy research to discuss how their work can influence our understanding of the neurobiology of epilepsy, the development of novel treatment strategies, and epilepsy clinical care. It includes exciting scientific data and expert-led discussion of how these areas of study affect epilepsy, and is useful to scientists, clinicians, care providers, epilepsy professionals, and patients groups.

Learning Objectives

Following participation in this activity, participants will be able to:

- Create dialogue between leading researchers outside the field of epilepsy and epilepsy researchers and clinicians
- Develop knowledge of sex differences in neurological disease and how they apply to understanding the neurobiology of epilepsy
- Investigate the role of immune cells in the brain and how they can contribute to epilepsy

Chair: Chris Dulla, PhD

Program

Introduction | Chris Dulla, PhD

Introduction to Sex Differences in Neurological Disease | Catherine Christian-Hinman, PhD

Sex Differences in Neurological Disease | Farida Sohrabji, PhD, FAHA

Introduction to Immune Cells in Epilepsy | Nicholas Varvel, PhD

Immune Cells in CNS Diseases | Michelle Monje-Deisseroth, MD, PhD

Clinical Impact Conversation Leader | Nigel Pedersen, MD, FAES

Panel Discussion | All Faculty

3:15–5:30 PM

Platform D: Neurophysiology

Location: Music City Center, Room 202 B, Level 2

Moderators: Jane Allendorfer, PhD; and Jonathan Kleen, PhD

Platform E: Clinical Epilepsy

Location: Music City Center, Room 103 B, Level 1

Moderators: Stephane Auvin, MD, PhD; and Lisa Garrity, PharmD

Platform F: Genetics and Behavior / Neuropsychology / Language

Location: Music City Center, Room 205 B, Level 2

Moderators: Robyn Busch, PhD; and Tristan Sands, MD, PhD

There will be two concurrent sessions of selected key scientific abstracts. Authors will present a 10-minute overview of their work followed by a five-minute Q&A session.

See page 40 for full platform listing.

5:45–8:15 PM

Pediatric State of the Art Symposium | Addressing Knowledge Gaps in Early Life Epilepsy

Music City Center, Karl F. Dean Ballroom B1, Level 4

 **CME & CE**

Overview

The incidence of epilepsy is highest in the first years of life and drug-resistant epilepsy is more common in this age group, yet clinical practice, including diagnostic evaluation and management strategies, vary widely. Early recognition and resolution of seizures in this age group are essential to optimize developmental outcome, as uncontrolled seizures at this critical period of brain development can result in developmental stagnation or declines.

This session explores recent research into the diagnosis and management of early onset epilepsy, highlighting effective evaluation and treatment strategies, while exploring methods to evaluate therapeutic efficacy using comparative effectiveness research when placebo-controlled clinical trials may not be possible. The session highlights new approaches to identify biomarkers while exploring gaps in basic science models of early life epilepsy to encourage further exploration of this important population.

Learning Objectives

Following participation in this activity, participants will be able to:

- Select the most appropriate diagnostics testing for evaluation of early life epilepsy

Registrants: Find the most up-to-date information at aesnet.org/AES2022

- Evaluate effectiveness of different treatment approaches for early life epilepsy
- Define multiple knowledge gaps in the evaluation and treatment of early life epilepsy

Chair: M. Scott Perry, MD

Program

Introduction: The Time is Now | M. Scott Perry, MD

Case Presentation, Part 1 | Saher Suleman, MD

Lessons Learned Through Early Victories: The Early Life Epilepsy Registry | Elaine Wirrell, MD

The Pediatric Epilepsy Learning Healthcare System (PELHS): Answering Big Questions with Bigger Data | Zachary Grinspan, MD, MS, FAES

Case Presentation, Part 2 | Saher Suleman, MD

What We Don't Know Can Hurt Others: Disparities in Treatment of Infantile Spasms | Kerri Neville, MD

Strength in Numbers: Developing Biomarkers in Rare Epilepsies | Daniel Shrey, MD, FAES

Case Presentation, Part 3 | Saher Suleman, MD

Debate: Early Surgery vs. Waiting for a Second ASM Failure | Rani Singh, MD; and Chima Oluigbo, MD

Basic Science in the Early Life Epilepsies | Michael Hammer, PhD

Panel Discussion | All Faculty

Education Credit:

2.5 CME

At the time of printing this program, the application for nursing and pharmacy CE credits had been submitted and was pending approval from the Office of Interprofessional Continuing Professional Development. Please refer to aesnet.org/AES2022-accredited for a complete list of accredited sessions.

6:00–7:30 PM

SIG | Neonatal Seizures: Update on Treatment of Neonatal Seizures

Music City Center, Room 105 A, Level 1

Overview

Neonatal seizures are unique, and effective treatment requires an advanced level of knowledge and a specific approach that differs from the treatment of seizures in older children and adults. Over the past few years, there have been updates to our knowledge about the treatment of neonatal seizures. Because most neonatal seizures are acute reactive seizures, it is important to correctly identify and treat neonatal seizures. This SIG informs participants regarding the latest evidence-based treatments and provides a platform for discussion of applying these guidelines equally in the context of different practice settings and with the challenges of access to care.

Program | Monday, December 5

Learning Objectives

Following participation in this activity, participants will be able to:

- Define clinically available and clinical trials for anti-seizure medications for neonates
- Discuss the best first-line treatment for neonatal seizures
- Demonstrate the rationale for stopping or continuing treatment with anti-seizure medications for neonatal seizures in the context of access to care

SIG Coordinators:

John J. Millichap, MD, FAAN, FAAP, FACNS, FAES;
Elissa Yozowitz, MD, FAES; and Tiffani L. McDonough, MD

Chair: John J. Millichap, MD, FAAN, FAAP, FACNS, FAES

Program

Welcome and Introductions |

John J. Millichap, MD, FAAN, FAAP, FACNS, FAES

Summary of the Most Recent Randomized Control Trial for Neonatal Seizures |

Cynthia Sharpe, MBChB

Evidence for Treatment of Neonatal Seizures: A Review of the Guideline from the Neonatal Seizure Task Force |

Hans Hartmann, MD

When Should We Stop Treatment of Neonatal Seizures? |

Renée Shellhaas, MD, MS, FAES

Panel Session |

Millichap, Sharpe, Hartmann, Shellhaas

Concluding Remarks |

John J. Millichap, MD, FAAN, FAAP, FACNS, FAES

6:00 – 7:30 PM

SIG | Professional Wellness in Epilepsy Care: Clinician Burnout— Causes, Consequences, and Cures

Music City Center, Room 204, Level 2

Overview

Burnout has been defined by the World Health Organization as an occupational-related illness characterized by chronic workplace stress. It has been updated in the recent ICD11 but details are very few. Because of this, many people require more precise clarification on how to define and describe the diagnosis. Discussion of Biomarkers of Burnout will help to explain the spectrum of Physician Burnout. Cognitive issues, emotional intelligence, and misperceptions of situations are among the issues associated with physician burnout, which may be resolved by coaching. The role of coaching healthcare professionals and their organizations to improve well-being and workplace culture is a topic for one of the talks in this session.

The first talk describes Biomarkers of Burnout, to include biochemical, physiological, and anatomical aspects of the disorder as a basis for ideas for approaches to interventions. Coaching, distinct from mentoring and advising, has been of great value to professionals and has been shown in a few studies to benefit those in the healthcare industry. The second talk describes the role of coaching healthcare professionals gained from

their experience at a nationally recognized center for professional well-being. The other parts of the session include audience participation to describe the progress and successes of well-being initiatives in their departments. The session concludes with a panel discussion and audience polling on the above topics and related issues.

Learning Objectives

Following participation in this activity, participants will be able to:

- Describe the different biological characteristics of physician burnout
- Recognize how coaching individuals and groups in healthcare systems improves well-being and workplace culture
- Describe the impact of well-being initiatives in healthcare systems across the country to reduce healthcare professional burnout

SIG Coordinators:

Cormac A. O'Donovan, MD, FRCPI, FACNS;
Steven C. Schachter, MD, MMSc, FAES; and
Lauren Frey, MD, FAES

Chair: Cormac A. O'Donovan, MD, FRCPI, FACNS

Program

Biomarkers of Burnout: Why, What, and How |

Cormac A O'Donovan, MD, FRCPI, FACNS

Addressing Sources of Burnout: Individual and Organizational Changes Using Coaching |

Charlene M. Dewey, MD, MEd, MACP

Managing for Meaning: Leading the Way to Better Practice and Stronger Providers |

Matthew W. Luedke, MD, FACNS

6:00 – 7:30 PM

SIG | SUDEP: Sudden Unexpected Death in Epilepsy (SUDEP) Through the Lens of Non-traditional Semiologies, Genes, and Models

Music City Center, Room 205 B, Level 2

Overview

SUDEP cases do not always exhibit traditional patterns of seizure-induced cardiorespiratory failure. Most SUDEP is thought to be associated with cardiorespiratory collapse in the immediate aftermath of a generalized tonic-clonic seizure. Genetic SUDEP risk is usually ascribed to mutations in ion channel genes that affect brain and heart rhythms. However, sometimes SUDEP cases do not fit neatly into these categories, providing important exceptions to the 'rules' that can yield important information to help unlock the secrets of SUDEP. From a basic science perspective, the majority of what is known about SUDEP physiology and genetics comes from work in mouse models. However, other types of models exist which can provide critical insights not possible in mice.

This session examines non-traditional forms and models of SUDEP and how they can enhance our understanding of SUDEP susceptibility. It explores less traditional forms of SUDEP, focusing on examples exhibiting non-canonical semiology and genetic causes. Less widely used non-mouse models of SUDEP are also discussed and considered.

Learning Objectives

Following participation in this activity, participants will be able to:

- Describe semiologies of SUDEP that do not directly involve seizures or normal cardiorespiratory mechanisms
- Identify non-ion channel genes that contribute to SUDEP risk
- Describe the roles of non-mouse models of SUDEP

SIG Coordinators: Edward Glasscock, PhD; William Nobis, MD, PhD; and Nuria Lacuey Lecumberri, MD, PhD

Chair: Edward Glasscock, PhD

Program

Non-seizure SUDEP | Samden Lhatoo, MD, FRCP

Gastric-acid Induced Laryngospasm as a Novel SUDEP Mechanism | Pedro Irazoqui, PhD

DEPDC5 Mutations as a Non-Ion Channel Cause of SUDEP | Christopher J. Yuskaitis, MD, PhD

Non-human Primate Models of SUDEP | Charles Akos Szabo, MD, FAES

6:00–7:30 PM

SIG | Tuberous Sclerosis: Tuberous Sclerosis Complex (TSC) Classification — Clinical, Physiologic, Genetic, Imaging Prognostic Features

Music City Center, Room 202 B, Level 2



Overview

There is a desperate need for earlier and more precise methods of characterizing the phenotypic variability in patients with Tuberous Sclerosis Complex (TSC). A careful phenotyping approach promises to inform which TSC patients will benefit from specific medical and surgical therapies. The idea of a single treatment approach for all TSC patients may no longer be optimal, given the significant advances in our understanding of this condition.

In this SIG, we leverage recent clinical, physiologic, genetic, and imaging discoveries in order to facilitate prognostic classification for TSC.

Learning Objectives

Following participation in this activity, participants will be able to:

Discuss the current understanding of biomarkers of phenotypic variability in TSC, highlighting those features revealed by clinical assessment and neuroimaging

- Explore the clinical impact and therapeutic implications of phenotypic heterogeneity in TSC
- Identify specific areas of further investigation that may lead to earlier and more precise phenotyping in TSC, facilitating the delivery of individually tailored medical and surgical therapies

SIG Coordinators: Howard L. Weiner, MD, FAANS, FAAP, FACS; and Ryan E. Gill, MD, FAAP

Chairs: Brenda Porter, MD, PhD; and Howard L. Weiner, MD, FAANS, FAAP, FACS

Program

Introduction and Welcome to the Tuberous Sclerosis SIG | Ryan E. Gill, MD, FAAP

Early Biomarkers for Neurologic and Epilepsy Outcomes in TSC | S. Katie Z. Ihnen, MD, PhD

Imaging in TSC as a Method for Early Identification of Epilepsy and Developmental Disorders | Hanna M. Hulshof, MD

Ferroptosis as a Potential Disease Mechanism in Tuberous Sclerosis Complex | Delia Maria Talos, MD

Frequency of Epilepsy Appearance After Discontinuation of Preventive Epilepsy Treatment in TSC | Sergiusz Jozwiak, MD, PhD

Serum Biomarkers in Adult Patients with Tuberous Sclerosis Complex: Clues of Neuroinflammation | Alessandra Morano, MD, PhD

Education Credit:

1.5 CME

At the time of printing this program, the application for nursing and pharmacy CE credits had been submitted and was pending approval from the Office of Interprofessional Continuing Professional Development. Please refer to aesnet.org/AES2022-accredited for a complete list of accredited sessions.

6:00–7:30 PM

SIG | Tumor-Related Epilepsy (TRE): Establishing Standards of Care in Medical Management

Music City Center, Room 102 A, Level 1



Overview

Despite recent advances in general epilepsy therapies and the understanding of TRE pathophysiology, modern medical management of TRE is not standardized and subject

Program | Monday, December 5

more to variable practice styles than published evidence. Guidelines for the medical management of TRE are lacking. Through review of the clinically relevant topics outlined in this SIG, we highlight which areas have quality evidence to support clinical practice, and which areas do not. This SIG reviews topics in the medical management of TRE along the disease timeline, with a focus on evidence-based standards of care, whether they exist or need to be developed. A moderated panel of experts in the field cover topics such as the peri-operative use of anti-seizure medications (ASMs), first-line medications, the role of neuropathology in TRE, standards of care for medical management in the neuro-oncology clinic, management of refractory TRE, and guidance on withdrawal of ASMs.

Learning Objectives

Following participation in this activity, participants will be able to:

- Remember and understand the available evidence supporting the withdrawal of ASMs in select groups of patients with brain tumors
- Apply current knowledge about histopathologic markers in their decision making process for the medical management of TRE
- Apply information presented in this program to the medical management of refractory TRE
- Implement more informed and standardized documentation of TRE clinical measures during clinic follow-up

SIG Coordinators: Thomas Wychowski, MD; Edward Avila, DO, FAAN; and Guy M. McKhann, MD, FAES

Chairs: Thomas Wychowski, MD

Program

Introduction: Making the Case for Establishing Standards of Medical Care for TRE | Thomas Wychowski, MD

Early Stage Medical Therapy for TRE: Peri-operative Management and First-line Therapy | Steven Tobochnik, MD

The Role of Neuropathology and Tumor Markers in the Medical Management of TRE | Sara K. Inati, MD, FAES

Standards of Care for TRE Management in the Neuro-oncology Clinic | Edward Avila, DO

Later Stage Medical Therapy for TRE: Refractory TRE, Medication Withdrawal | William O. Tatum, DO, FAES

Education Credit:

1.5 CME

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6:00 – 9:00 PM

Industry Satellite Symposia

Music City Center

See page 116 for locations and other details

AES Career Fair at the 2022 AES Annual Meeting

In the Exhibit Hall

Saturday, December 3, 2022

12:00 – 6:00 PM

Sunday, December 4, 2022

10:00 AM – 4:00 PM

Connect with potential employers seeking to fill open positions — all under one roof during the 2022 AES Annual Meeting in Nashville.

Employers will be seeking to meet with epileptologists, neurologists, and experts in all sub-specialties of these roles.



**AES 2022
ANNUAL
MEETING**

7:00–8:30 AM

SIG | Basic Mechanisms and Neuroscience of Epilepsy: Paradoxical Mechanisms of Hyperexcitability in Epileptic Circuits

Music City Center, Room 202 B, Level 2

Overview

Historically, epilepsy and seizure generation have been considered to represent an imbalance between neuronal excitation and inhibition (E/I). This concept, born from recordings of synaptic and membrane potentials in early animal models, has been invaluable for guiding our understanding of the physiological basis of seizure and anti-seizure drug mechanisms. However, evolving knowledge of developmental changes, cell type specificity, and neuronal circuit complexity suggests that a straightforward concept of E/I imbalance is inadequate in many ways, and at least requires expansion if we are to use it as a guide to further our mechanistic understanding of genetic epilepsies and how to treat them.

This session highlights recent studies in animal models of epilepsy demonstrating how changes in molecular function that would be expected to decrease excitability of neurons lead to hyperexcitable circuits and seizure. It shows that seizures and circuit hyperexcitability can paradoxically result from changes that are traditionally thought to reduce neuronal excitability, such as an increase in K⁺ channel function, loss of Na⁺ channel function, or a decrease in excitatory synaptic transmission.

Learning Objectives

Following participation in this activity, participants will be able to:

- Recognize that the physiological effects of potassium channel gain-of-function variants depend on cell type and brain region
- Recognize that compensatory reductions in inhibition often occur in mice where genes linked to seizure phenotypes are haplo-insufficient
- Recognize the difference between gain-of-function versus loss-of-function sodium channel variant-related seizures to advance precision medicine for epileptic patients carrying genetic variants

SIG Coordinators: Matthew Weston, PhD; Yang Yang, PhD; and Lena Nguyen, PhD

Chair: Matthew Weston, PhD

Program

KCNQ2 and KCNQ3 Gain-of-Function Pathogenic Variants and Brain Excitability: Lessons Learned from Mouse Models | Anastasios Tzingounis, PhD

Circuit-based Compensatory Mechanisms in Paradoxical Cortical Hyperexcitability | Michelle Antoine, PhD

Severe Deficiency of Voltage-gated Sodium Channel Nav1.2 Paradoxically Results in Neuronal Hyperexcitability | Yang Yang, PhD

7:00–8:30 AM

SIG | EEG: What is an Epileptiform Discharge?

Music City Center, Room 204, Level 2



Overview

Evaluating scalp electroencephalography (EEG) for interictal epileptiform discharges (spikes and sharp waves) is an important tool in the diagnosis and management of seizures and epilepsy. The presence and distribution of epileptiform discharges have important implications for supporting the diagnosis of epilepsy, determining epilepsy type, and localizing epileptogenic cortex. However, numerous studies have shown that identification of epileptiform discharges is often prone to error and significant variability, even among experts, which can have serious consequences in clinical care.

This SIG discusses and addresses the fundamental question of what is an interictal epileptiform discharge. Speakers discuss a standardized definition of interictal epileptiform discharges on scalp EEG, the neural mechanisms underlying these discharges, and ambiguities in determining the nature of sharp transients on scalp EEG.

Learning Objectives

Following participation in this activity, participants will be able to:

- Explain the neural basis for epileptiform EEG transients
- Implement a new, reliable definition for epileptiform discharges on scalp EEG
- Contrast benign EEG transients from epileptiform discharges and understand circumstances where uncertainty exists

SIG Coordinators: Daniel Friedman, MD, FAES; Rebecca Fasano, MD; and Fabio A. Nascimento, MD

Chairs: Daniel Friedman, MD, FAES; and Rebecca Fasano, MD

Program

What is an Epileptiform Discharge on EEG? – Towards a Reproducible Definition | Sandor Beniczky, MD, PhD, FEAN

Neural Mechanisms of Interictal Epileptiform Discharges | Jennifer N. Gelinias, MD, PhD

When Benign Variants are Not Always Benign | Fabio A. Nascimento, MD

Education Credit:

1.5 CME

Program | Tuesday, December 6

7:00–8:30 AM

SIG | Epilepsy and Aging: Pharmacotherapy Challenges in Managing Older Adults and Elderly with Epilepsy

Music City Center, Room 105 A, Level 1



Overview

Anti-seizure medication (ASM) trials leading to FDA approval typically have under-representation of older adults and the elderly. However, older adults are the age group with the highest risk of developing epilepsy. Due to the added complexity of co-morbidities, physiological changes of aging, and the unique etiopathogenesis of late-onset epilepsy, ASM management in older adults and elderly is nuanced and can be challenging. As we live in a rapidly aging population, there is a critical need to better examine the use of existing ASMs and outcomes in older adults and the elderly. In addition, targeted drug therapies tailored towards seizures in this population require a paradigm shift in the pre-clinical drug discovery stage.

This SIG highlights the cutting edge information on these fronts: 1) progress being made in the basic science field, with an appraisal of how aged rodent models are currently used in epilepsy research; 2) current data on ASM efficacy in aged rodent epilepsy models; 3) discussion of the remaining gaps in knowledge on the future integration of aging-related neurological disease models to discover ASMs and/or uncover novel therapeutic targets for epilepsy. In addition, we discuss a therapeutically challenging form of epilepsy, unique to older adults and the elderly, autoimmune LGI1/CASPR2 epilepsy, including a discussion on the recent randomized controlled trial of immunotherapy for this condition. Finally, we discuss insights gained about the management of late-onset epilepsy among the elderly from one of the longest-running registries of newly diagnosed epilepsy patients, spanning over 30 years, at Western Infirmary at Glasgow.

Learning Objectives

Following participation in this activity, participants will be able to:

- Define the current status of anti-seizure medication research in the aged rodent epilepsy models
- Describe pharmaco-immunotherapy for management of autoimmune LGI1/CASPR2 epilepsy, which is unique to older adults and the elderly
- Describe lessons learned from a 30-year longitudinal cohort study about the management and outcomes of epilepsy in the elderly

SIG Coordinators: Vineet Punia, MD, MS;
Emily Johnson, MD; and Melissa Barker-Haliski, PhD
Chairs: Vineet Punia, MD, MS; and Emily Johnson, MD

Program

Introduction | Vineet Punia, MD, MS

Can Old Animals Reveal New Targets? The Aging and Degenerating Brain as a New Opportunity for Epilepsy Drug Discovery | Melissa Barker-Haliski, PhD

Managing Autoimmune LGI1/CASPR2 Epilepsy: A Challenging Epilepsy Type of the Elderly | Divyanshu Dubey, MBBS

Treatment Strategies and Outcomes of Epilepsy Among Older People | Patrick Kwan, MB, Bchir, PhD

Education Credit:

1.5 CME

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7:00–8:30 AM

SIG | Pediatric Epilepsy Case Discussions: Complex and Intractable Infantile Onset Epilepsy – A Medical and a Surgical Case

Music City Center, Room 102 A, Level 1



Overview

There is a knowledge gap in appropriate evaluation, diagnosis, and medical, as well as surgical, treatment of complex intractable epilepsies of infantile onset. Often, such epilepsies are challenging to classify electro-clinically and need timely investigation for underlying etiology to dictate early and effective treatment. The clinical course of infantile onset epilepsies is often associated with a high burden of mixed seizure types and acute exacerbations with status epilepticus and seizure clusters. This session discusses two cases of complex and intractable epilepsy in infancy, one medical and another with surgical treatment, highlighting such challenges. One case will be an infant who presented with status epilepticus, and later was diagnosed with an intractable genetic epilepsy. The second case will be of a patient with infantile onset intractable epilepsy that later in the course of the disease had a successful epilepsy surgery.

An interactive case discussion format involving all the faculty members is utilized. One faculty presents the case overview, and at each critical point during diagnostic work-up and treatment steps, poses questions to the faculty as the clinical story unfolds. Additionally, audience remarks and questions are taken at key points during and at the end of each case. The chair and co-chair moderate and participate in the discussion of one case each, and the incoming vice chair presents one case.

7:00 – 8:30 AM

SIG | Psychogenic Non-Epileptic Seizures (PNES): Update on Neuroimaging of PNES and Other Functional Neurological Disorders (FNDs)

Music City Center, Room 106 B, Level 1



Overview

In the last 10 years, the field has made great progress in identifying many structural and functional underpinnings of PNES / FNDs. Several large PNES / FND neuroimaging studies have been conducted and results reported. In this context, the presenters discuss the recent findings of structural (e.g., voxel-based morphometry), structural connectivity (diffusion magnetic resonance imaging [MRI] and application of advanced structural connectivity measures), resting state functional connectivity, functional MRI (fMRI) task (e.g., valence or stress induction) studies, and electroencephalography (EEG) studies, as well as focus on an agenda for future imaging research.

Learning Objectives

Following participation in this activity, participants will be able to:

- Identify the structural abnormalities associated with PNES / FNDs
- Identify the functional abnormalities associated with PNES / FNDs
- Describe the relationship between neuroimaging abnormalities and neuropsychopathology of PNES and other FNDs
- Better design treatment trials in PNES / FNDs that incorporate neuroimaging as a way of investigating the mechanism of action of these interventions

SIG Coordinators:

Jerzy P. Szaflarski, MD, PhD, FAAN, FAES;
Gaston Baslet, MD, FAES; and
Benjamin Tolchin, MD, MS

Chair: Jerzy P. Szaflarski, MD, PhD, FAAN, FAES

Program

Structural Abnormalities in Patients with PNES |
Ayushe A. Sharma, PhD candidate

Abnormalities in Structural Connectivity in Patients with PNES | Ali A. Asadi-Pooya, MD

EEG and Imaging of Pediatric PNES |
Kasia Kozłowska, MD, PhD

Relationship Between Resting State Functional Connectivity in PNES and Behavioral / Neuropsychiatric Measures | Adam M. Goodman, PhD

Task-based fMRI Studies in PNES |
Jerzy P. Szaflarski, MD, PhD, FAAN, FAES

Learning Objectives

Following participation in this activity, participants will be able to:

- Review the evaluation and medical treatment of complex intractable epilepsies of infancy
- Describe basic and complex pre-surgical evaluation steps, and recognize surgical candidates among children with epilepsy of infantile onset
- Learn clinical approaches to management of infantile epilepsies, and how to weigh benefits and risks to select the best management option

SIG Coordinators: Ajay Gupta, MD, FAES;
Sarah Aminoff Kelley, MD; and
Sanjeev V. Kothare, MD, FAES

Chairs: Ajay Gupta, MD, FAES; and
Sarah Aminoff Kelley, MD

Program

Complex and Intractable Infantile Onset Epilepsy – A Medical and a Surgical Case – Moderator, Participant, and Discussant | Sarah Aminoff Kelley, MD

Complex and Intractable Infantile Onset Epilepsy – A Medical Case – Case Presenter |
Sanjeev V. Kothare, MD, FAES

Complex and Intractable Infantile Onset Epilepsy – A Medical and a Surgical Case – Moderator, Participant, and Discussant |
Ajay Gupta, MD, FAES

Complex and Intractable Early Onset Infantile Epilepsy – A Surgical Case – Case | Ahsan Moosa Naduvil Valappil, MD

Complex and Intractable Infantile Onset Epilepsy – A Medical and a Surgical Case – Participant and Discussant |
Coral Stredny, MD

Education Credit:

1.5 CME

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Program | Tuesday, December 6

Education Credit:

1.5 CME

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8:45 – 10:45 AM

Hot Topics Symposium | From Traumatic Brain Injury to Post-traumatic Epilepsy and its Co-morbidities

Music City Center, Karl F. Dean Grand Ballroom B1, Level 4



Overview

Despite decades of productive translational research on fundamental neuronal mechanisms underlying epileptogenicity, there remain no pharmacological treatments to prevent epilepsy after acquired brain injuries. Traumatic brain injuries (TBI) and post-traumatic epilepsy (PTE) are attractive models in which to study anti-epileptogenic therapies, given the high prevalence of TBI and the short latency period to development of PTE. Recent basic science and prospective clinical studies have revealed a wide range of life-time events and biological processes that may be involved in the transition from an injured brain to an epileptic brain. Innovations in both basic science and clinical care suggest that we may be closer than ever to identifying subjects at risk of epileptogenesis after TBI, novel therapeutic approaches to prevent PTE, and means to improve the quality-of-life of subjects with PTE.

This session includes five presentations that provide the current state-of-the-art of understanding 1) the characteristics of TBI that relate to development of PTE, emerging from large prospective multicenter studies; 2) the thalamic molecular, cellular, and network alterations related to epileptogenesis after TBI; 3) the importance of treating acute post-TBI seizures and/or status epilepticus and its possible contribution to later epileptogenesis; 4) the current status of biomarker and therapy discovery for prevention of epileptogenesis after TBI; and 5) the needs of patients living with epilepsy after TBI

Learning Objectives

Following participation in this activity, participants will be able to:

- Design innovative pre-clinical and clinical study designs to pinpoint subjects-at-risk of PTE and mechanisms and treatment targets of post-traumatic epileptogenesis
- Justify the use and selection of anti-seizure treatment at the acute post-injury phase

- Identify common co-morbidities associated with post-traumatic epilepsy and assess strategies to deal with multifactorial needs of patients with PTE

Chairs: Asla Pitkänen, MD, PhD; and Ramon Diaz-Arrastia, MD, PhD

Program

Introduction | Asla Pitkänen, MD, PhD

What Have We Learned on Post-traumatic Epilepsy in Prospective Large Multicenter Studies: Is There an Epileptogenic TBI Endophenotype? | Ramon Diaz-Arrastia, MD, PhD

Sleep, Inflammation, and Inhibitory Microcircuits: Is Thalamus Emerging as an Epicenter for Post-traumatic Epileptogenesis? | Jeanne Paz, PhD

Prophylaxis and/or Treatment of Acute Post-TBI Seizures and Status Epilepticus: Who, When, Why, Which, and How: Is There Enough Data for Consensus? | Eugen Trinka, MD, MS, FRCP

Can Post-traumatic Epileptogenesis be Prevented: Any Hope on the Horizon? | Asla Pitkänen, MD, PhD

Quality-of-Life Determinants in Post-traumatic Epilepsy: Is it Just About the Seizures | Mary Jo Pugh, PhD, RN, FAES

Panel Discussion | All Faculty

Education Credit:

2.0 CME

At the time of printing this program, the application for nursing and pharmacy CE credits had been submitted and was pending approval from the Office of Interprofessional Continuing Professional Development. Please refer to aesnet.org/AES2022-accredited for a complete list of accredited sessions.

8:45 – 10:45 AM

Scientific Symposium | The Many Facets of Neurodegeneration in Epilepsy

Music City Center, Karl F. Dean Grand Ballroom A1, Level 4



Overview

Emerging evidence from pre-clinical studies and epidemiological data point to shared pathological mechanisms in epilepsy and dementia. This is clinically suggested by the similarity of cognitive features and occurrence of seizures in both conditions. Pathological tau and amyloid deposits, commonly seen in neurodegenerative conditions, are also detected in post-mortem and surgically resected tissue of patients with epilepsy. Neuroimaging studies of structure, function, and metabolism provide evidence for disease-related progression, most pronounced but not restricted to temporal lobe epilepsy with hippocampal sclerosis. Similar neurodegenerative features are increasingly recognized

also in other, lesional and genetic generalized epilepsy syndromes, suggesting that such processes may be common to different types of epilepsy.

This session presents current progress on the understanding of neurodegenerative processes in epilepsy, from pre-clinical, clinical, cognitive, histopathological, and neuroimaging perspectives. We discuss the relevance of neurodegeneration in relation to epilepsy surgery and the potential of therapeutic strategies to slow down or possibly prevent disease progression, both at the level of brain health and cognition.

Learning Objectives

Following participation in this activity, participants will be able to:

- Recognize the significance of neurodegenerative processes in epilepsy
- Review the pathological evidence for neurodegeneration across epilepsies
- Recognize the link between seizures, genes, cellular alterations, and behavioral deficits in preclinical models of Alzheimer's disease and epilepsy
- Identify the nature and prevalence of cognitive profiles of neurodegeneration
- Discuss structural and metabolic imaging evidence for disease progression, and implications for epilepsy surgery

Chair: Andrea Bernasconi, MD

Program

Introduction | Andrea Bernasconi, MD

Characterizing Neurodegenerative Pathology in Epilepsy and Potential Drivers | Maria Thom, MD, MBBS

Pre-clinical Models of Neurodegeneration in Epilepsy | Jeannie Chin, PhD

Cognitive Profiles Associated with Neurodegeneration in Epilepsy | Carrie McDonald, PhD, FAES

Imaging Correlates of Pathological Aging in Epilepsy | Matthias Koepp, MD, PhD

Multimodal Connectome Models of Epilepsy-related Disease Progression | Boris Bernhardt, PhD

Panel Discussion | All Faculty

Education Credit:

2.0 CME

At the time of printing this program, the application for nursing and pharmacy CE credits had been submitted and was pending approval from the Office of Interprofessional Continuing Professional Development. Please refer to aesnet.org/AES2022-accredited for a complete list of accredited sessions.

11:00 AM – 12:30 PM
12:45 – 2:15 PM

Clinical Skills Workshop | Genetics Testing in Epilepsy Patients

Music City Center, Room 106 B, Level 1

 **Additional Fee**

Overview

Expanding technologies are allowing us to interrogate the genome in novel ways, providing new options for clinical genetic testing for patients with epilepsy. Knowing which test to order, and for whom, remains a challenge in many epilepsy clinics. Once resulted, genetic findings are not always easily interpretable, making the path to molecular diagnosis more challenging.

This session provides overview and guidance on the testing modalities, how to approach genetic testing in both the pediatric and adult populations, and how to interpret test results.

Learning Objectives

Following participation in this activity, participants will be able to:

- Evaluate the different types of genetic testing options, including scope, benefits, and limitations of each
- Identify which patients are most likely to have an underlying genetic etiology and recognize which test is most appropriate
- Demonstrate how genetic variants are classified in diagnostic labs and interpreted in the clinic

Chairs: Danielle Andrade, MD, MSc, FRCPC; and Ingo Helbig, MD

Program

Genetics in Epilepsy: Navigating the Testing Market and Interpreting Results | Lacey Smith, MS, CGC

Genetic Evaluation of the Pediatric Patient with Epilepsy | Ingo Helbig, MD

Genetic Evaluation of the Adult Patient with Epilepsy | Danielle Andrade, MD, MSc, FRCPC

Program | Tuesday, December 6

11:00 AM – 12:30 PM
12:45 – 2:15 PM

Clinical Skills Workshop | Intracranial Electrode Studies

Music City Center, Room 105 A, Level 1

 **Additional Fee**

Overview

Over the past 30 years, resection for medically intractable epilepsy has become a standard treatment option. However, in many instances, successful surgery is not possible without defining the potential resective volume by intracranial electrophysiology.

In this interactive workshop where cases are presented to illustrate different problems to be solved by defining a region of epileptogenesis, participants work in groups to provide a consensus intracranial study. An experienced epileptologist provides their institution's approach to the case and will describe the outcome.

Learning Objectives

Following participation in this activity, participants will be able to:

- Discuss the indications for Invasive monitoring
- Recognize the limitation, advantages, and disadvantages of different methods of explorations
- Reflect on the utility of invasive monitoring in promoting seizure free outcome

Chairs: Yemi Damisah, MD; and Jorge Gonzalez-Martinez, MD, PhD

Program

Case 1 SEEG | Thandar Aung, MD

Case 2 Subdural Grid | Yemi Damisah, MD, MHSc

Case 3 SEEG | Jorge Gonzalez-Martinez, MD, PhD

11:00 AM – 12:30 PM
12:45 – 2:15 PM

Clinical Skills Workshop | Misadventures in EEG

Music City Center, Room 102 A, Level 1

 **Additional Fee**

Overview

Misinterpreted EEG remains a segue to mistreating patients with epilepsy. Due to the limited exposure and/or experience associated with a majority of neurologists involved in clinical practice, errors may occur and result in patient misfortune. Common artifacts, benign variants, and normal variations are at the top of the list relative to pitfalls though combinations of waveforms, and unique scenarios in and out of the hospital setting will provide different challenges.

This interactive workshop provides real-life examples of scenarios where epileptiform activity could be missed or mistaken for abnormality and result in a "misadventure" in patient management. Topics involve standard EEG, both basic and advanced, as well as those acquired on an outpatient and inpatient basis within the ICU setting. Some examples of OR monitoring and intracranial EEG are shown, but the primary focus is on the early-moderate learner who is involved in interpreting routine EEGs on an intermittent basis. The purpose is to encompass the most common pitfalls that are likely to be encountered and the reasons why "abnormal" is not met as a criterium for an impression.

Learning Objectives

Following participation in this activity, participants will be able to:

- Identify and avoid common pitfalls presented during routine interpretation of EEG
- Use a step-wise and orderly approach to EEG interpretation designed to limit misinterpretation
- Demonstrate and conduct the rationale behind the primary definition of normal vs. abnormal (epileptiform) EEG

Chairs: William Tatum, DO, FAES; and Lawrence Hirsch, MD, FAAN, FACNS, FANA, FAES

11:00 AM – 12:30 PM
12:45 – 2:15 PM

Clinical Skills Workshop | Neuroimaging Case Review: Conventional and Computer-assisted Analysis

Music City Center, Room 202 B, Level 2

 **Additional Fee**

Overview

Oftentimes, clinicians do not obtain a proper training to evaluate the magnetic resonance imaging (MRI) of their patients, particularly in computer-assisted image analysis. This session teaches conventional and computer-assisted evaluation of structural MRI. Attendees review imaging data of real cases of patients with drug-resistant epilepsy having undergone pre-surgical investigation under the guidance of the faculty. This session promotes image analysis as a core component of clinical decision making.

Learning Objectives

Following participation in this activity, participants will be able to:

- Conduct a systematic review of structural MRI data
- Recognize imaging characteristics of prevalent lesions associated with drug-resistant epilepsy
- Use computer-assisted analysis to enhance the detection of difficult-to-see lesions

Chairs: Andrea Bernasconi, MD; and Neda Bernasconi, MD, PhD

Program

Visual Evaluation and Computer-assisted Analysis of Structural MRI | Andrea Bernasconi, MD

11:00 AM – 12:30 PM
12:45 – 2:15 PM

Clinical Skills Workshop | Neurostimulation in Epilepsy

Music City Center, Room 205 B, Level 2

 **Additional Fee**

Overview

Neurostimulation is an FDA-approved treatment for drug-resistant epilepsy. Indications, efficacy, adverse effects, and programming vary by device. Additionally, programming of these approved devices can be complex and requires training and practice. Three stimulation devices are approved for these patients: the vagal nerve stimulator (VNS), the responsive neurostimulator (RNS), and the deep brain stimulator (DBS). This session is designed to discuss neurostimulation in drug-resistant epilepsy and provide a hands-on experience for interrogating and programming the three FDA approved neurostimulation devices.

This workshop discusses the trials and post-marketing experience that established the tolerability and efficacy of these devices and instructs on how to use them effectively. Participants gain hand-on experience for interrogating and programming each of these devices.

Learning Objectives

Following participation in this activity, participants will be able to:

- Describe indications, efficacy, and common adverse effects of vagal nerve stimulation, responsive neurostimulation, and deep brain stimulation
- Identify patients for whom a neurostimulation device is appropriate
- Demonstrate the ability to perform basic programming on each of the three neurostimulation devices
- Utilize information gained from the session to improve patient outcomes in their home institution

Chairs: Patricia Dugan, MD, FAES; and Katie Bullinger, MD, PhD

Program

Neurostimulation in Epilepsy: RNS | Patricia Dugan, MD

Neurostimulation in Epilepsy: DBS | Katie Bullinger, MD, PhD

Neurostimulation in Epilepsy: VNS | Steven Karceski, MD

11:00 AM – 12:30 PM
12:45 – 2:15 PM

Clinical Skills Workshop | Pearls of Video EEG

Music City Center, Room 103 B, Level 1

 **Additional Fee**

Overview

The epilepsy monitoring unit remains a challenging environment in which to diagnose seizures/spells and perform various phases of the pre-surgical and surgical evaluation for patients with epilepsy.

This interactive workshop covers the complex nature of care and the evaluation process. Examples of the unique features of patient evaluation, management, and care in this environment are presented with an emphasis on best practices and safety.

Learning Objectives

Following participation in this activity, participants will be able to:

- Apply knowledge gained from the session in managing their local institution/EMU
- List and describe common complications encountered in the EMU
- Utilize information gained from the session to improve patient outcomes in their home institution

Chairs: Joseph Drazkowski, MD, FAES; and Katherine Noe, MD, PhD, FAES

Other Programming

PARTNER EVENTS

FRIDAY, DECEMBER 2

9:00 AM – 4:00 PM

35th Annual Advances in the Management of Epilepsy and the Epilepsy Clinic

Location: Hilton Nashville Downtown

Pre-registration was required. Registration closed Wednesday, November 30. Call 800-642-0500 with questions.

This intensive one-day conference is designed for professionals who participate in the care of persons with epilepsy. The overall purpose is to improve services to individuals and families affected by epilepsy.

The conference is presented by the Epilepsy Information Service of Wake Forest University School of Medicine, Winston-Salem, North Carolina, through an unrestricted grant committed to the education of health professionals, in an effort to promote the comprehensive care of those with epilepsy and their families.

MONDAY, DECEMBER 5

7:00 – 8:30 AM

National Association of Epilepsy Centers (NAEC) Annual Meeting

Location available in the AES 2022 mobile app.

This is the annual meeting of the National Association of Epilepsy Centers. All providers at NAEC member epilepsy centers are invited to attend. *This meeting is open to NAEC members only.*

SCIENTIFIC EXHIBITS

SUNDAY, DECEMBER 4

8:00 – 11:00 AM

VNS Global Experience: Learning from the Past, Planning the Future (LivaNova)

Location: Music City Center, Room 207 A/B, Level 2

Research Updates from Eisai (Eisai Inc.)

Location: Music City Center, Room 208 A/B, Level 2

Behind the Seizure Program AES Scientific Exhibit: Transforming Genetic Epilepsy Diagnoses and Enhancing Care Pathways via State-of-the-Art Research (Invitae)

Location: Music City Center, Room 207 C/D, Level 2

2:00 – 5:00 PM

Marinus Scientific Updates on Ganaxolone (Marinus Pharmaceuticals, Inc.)

Location: Music City Center, Room 208 A/B, Level 2

Scientific Exhibit of Xenon's Clinical and Research Programs: Featuring XEN1101, a Novel Potassium Channel Opener for the Treatment of Epilepsy (Xenon Pharmaceuticals Inc.)

Location: Music City Center, Room 207 C/D, Level 2

Recent Advancements in the Treatment of Seizure Clusters (Neurelis, Inc.)

Location: Music City Center, Room 207 A/B, Level 2

MONDAY, DECEMBER 5

8:00 – 11:00 AM

UCB: Leading with Science for Epilepsy and Rare Epilepsy Syndromes (UCB, Inc.)

Location: Music City Center, Room 207 A/B, Level 2

Epidiolex® (CBD) Treatment Outcomes, Safety, and Real-world Evidence (Jazz Pharmaceuticals, Inc.)

Location: Music City Center, Room 208 A/B, Level 2

DIACOMIT® (stiripentol): An Update on Mechanisms, Efficacy and Safety in the Treatment of Developmental & Epileptic Encephalopathies (BIOCODEX)

Location: Music City Center, Room 207 C/D, Level 2

2:00 – 5:00 PM

SK Life Science Special Scientific Exhibit and Posters (SK Life Science, Inc.)

Location: Music City Center, Room 208 A/B, Level 2

A Novel 5HT_{2C} Superagonist for Treatment of Rare Seizure Disorders: LP352 and the PACIFIC Study (Longboard Pharmaceuticals Inc.)

Location: Music City Center, Room 207 A/B, Level 2

MR Imaging Considerations for Patients with Multiple Neurological Implants (Ad-Tech Medical Instrument Corp.)

Location: Music City Center, Room 207 C/D, Level 2

Other Programming

SATELLITE SYMPOSIA

FRIDAY, DECEMBER 2

6:00 AM – 9:00 PM

Industry CME Satellite Symposium | Clinical Perspectives on Cannabinoids: From Barriers to Better Care

Location: Music City Center, Davidson Ballroom C, Level 1M



CME for this session is provided by Medscape.

This MedscapeLIVE! Town Hall will be a 90-minute symposium presented by up to 4 key opinion leaders with original slides and audience response questions. The symposium will focus on the non-seizure symptoms associated with developmental and epileptic encephalopathy, the impact of behavioral and cognitive symptoms in patients with DEE, and the use of anti-seizure medications and nonpharmacologic tools to manage DEE. Attendees of the Town Hall engage with expert faculty by participating in case-based dialogue, submitting questions, and using real-time polling in a proprietary interactive platform. Immediately before the event and throughout, participants will be able to submit questions to the faculty, email slides and other content to themselves for future reference, complete course evaluations and request CME credit, view and interact with the content being presented, and participate in case studies and polling.

This activity is supported by Jazz Pharmaceuticals, Inc.

6:00 AM – 9:00 PM

Industry Non-CME Satellite Symposium | An Update on Pharmacological Treatments for Refractory Epilepsy and its Prevention

Music City Center, Davidson Ballroom B, Level 1M

Drug-resistant epilepsy (DRE) is a major unmet need in epilepsy. Approximately one-third of epilepsy patients fail to respond to treatment with approved anti-seizure medications (ASMs). The proportion of epilepsy patients who suffer from DRE has not changed during the last 30 years in spite of approval of >20 new ASMs, including ASMs with diverse mechanism of actions. A number of hypotheses have been proposed to explain the development of drug-resistant epilepsy. In this special symposium, we propose to review the clinical data of refractory epilepsy, discuss findings from animal models used to develop our current understanding of the molecular mechanisms underlying drug-resistant epilepsy, and summarize these hypotheses. We will close with a clinical review of recent advances in the treatment of DRE.

This activity is supported by SK Life Science, Inc.

6:00 AM – 9:00 PM

Industry Non-CME Satellite Symposium | Exploring Health Disparities, Inequities, and Barriers to Care for Black Patients Living with Epilepsy

Music City Center, Davidson Ballroom A, Level 1M

There are >375,000 African Americans with epilepsy in the US. They are likely diagnosed in the ED, have uncontrolled seizures, and status epilepticus. Unique challenges leading to poor outcomes are understudied and under-recognized. Major obstacles to care due to racial disparity include limited financial resources, lack of knowledge, poor patient-provider communication, and lack of social support. Medical mistrust is related to mistreatment legacies, but also stems from inequities to access insurance, healthcare facilities, and treatments. Disparity also exists between the racial composition of the population and the neurologist workforce (2019: 13% Blacks and only 3% Black neurologists). At UCB, our research shows that optimal care starts with awareness and recognition of disparities, understanding and commitment to remedy medical mistrust, identifying challenges in getting healthcare, and responsibility to develop solutions leading to positive change for the Black population.

This activity is supported by UCB, Inc.

SUNDAY, DECEMBER 4

6:00 AM – 9:00 PM

Industry Non-CME Satellite Symposium | Paradigm Shifts in Epilepsy – How New Technology and Novel Care Models are Being Used to Close the Epilepsy Treatment Gap

Music City Center, Davidson Ballroom C, Level 1M

With advances in imaging, SEEG, LITT, neuromodulation, and chronic iEEG recording, the landscape of epilepsy specialty care is poised for rapid transformation. Yet even as more patients gain access to seizure localization, the number of surgical interventions for drug-resistant epilepsy remains stubbornly low. We will discuss why the treatment gap persists and opportunities to adopt new technologies, new clinical practices, and new referral models to improve quality of life for more refractory patients.

This activity is supported by NeuroPace, Inc.

Other Programming

6:00 AM – 9:00 PM

Industry Non-CME Satellite Symposium | Long-term Outcomes of Treatment with BRIVIACT® (brivaracetam) and What It Means in the Real World

Music City Center, Davidson Ballroom A, Level 1M

In this symposium, we will highlight the clinical importance of real-world evidence, examine the challenges of collecting data in a real-world (RW) setting, and explore different methodologies to evaluate retention rates. Each methodology may be associated with various levels of bias affecting outcomes and leading to inconsistent reporting of retention rates with various anti-seizure medications (ASMs). In this symposium, we will use new BRIVIACT® (brivaracetam) data on long-term retention rates from RW experience to examine the utility of retention rate as an RW outcome. We will also examine BRIVIACT's retention rates in different RW sub-populations and how the composition of the study population may affect the retention rates. Finally, through an independent clinical patient cohort, we will demonstrate how the experience with BRIVIACT can impact retention, reasons for discontinuations, and AEs leading to discontinuations.

This activity is supported by UCB, Inc.

6:00 AM – 9:00 PM

Industry CME Satellite Symposium | Epilepsy Genetics Beyond the Pediatric Clinic: Applying Precision Medicine in Adult Epilepsy Patients

Music City Center, Davidson Ballroom B, Level 1M



CME

CME for this session is provided by the Postgraduate Institute for Medicine.

Developmental Epileptic Encephalopathies (DEEs) are devastating conditions marked by treatment-resistant seizures, abnormal electroencephalogram activity, and significant comorbid neurodevelopmental challenges for which there continues to be a high unmet need. These encephalopathies broadly include multiple epilepsy syndromes, often differentiated genetically and phenotypically. Patients with DEEs most often present during their pediatric years and, increasingly, many receive an accurate diagnosis in pediatric specialty clinics. However, many adult patients with DEEs remain undiagnosed. The symposium will focus on advances in this therapeutic area, including genetic testing, precision medicine, rational polypharmacy, targeted treatment, and care of adult patients with DEEs.

This activity is supported by UCB, Inc.

MONDAY, DECEMBER 5

6:00 AM – 9:00 PM

Industry CME Satellite Symposium | Building a Successful Single Unit Research Group and Best Practices in Capturing Single Unit Recordings

Music City Center, Davidson Ballroom C, Level 1M



CME

CME for this session is provided by the University of Utah

The Single Unit Symposium will include expert presentations, expert panel discussions, and a hands-on demonstration. The expert presentations, panel, and hands-on course will feature discussion and demonstration of surgical implantation best practices. The discussion will include setting up a successful human single unit research program, optimal strategies for experimental design and analysis techniques, and future uses of single neuron data for clinical and scientific purposes. The expert panel will allow audience members to get an interactive experience with our experts, which will include neurosurgeons, neurologists, and researchers with vast experience.

This activity is supported by Ad-Tech Medical Instrument Corp.

6:00 AM – 9:00 PM

Industry Non-CME Satellite Symposium | Intermittent Rescue Therapy for Seizure Clusters: Hypothesis-Generating Observation of Change Across Time in SEIZure interVAL (Time Between Seizure Clusters)

Music City Center, Davidson Ballroom A, Level 1M

Intermittent rescue treatments have been evaluated for termination of seizures or seizure clusters but not seizure cluster frequency. A change in SEIZure interVAL (SEIVAL) with long-term use of rescue treatment could demonstrate change in usage, supplementing other analyses of effectiveness and quality of life. Speakers will discuss an exploratory analysis of SEIVAL in patients with seizure clusters from a long-term safety study of diazepam nasal spray to assess whether timing of seizure clusters changes with treatment over time. Methods and results, showing a statistically and clinically significant increase in SEIVAL across 12 months, will be described. Clinical, resource utilization, and research implications of these results will be discussed by the panel.

This activity is supported by Neurelis, Inc.

SATELLITE SYMPOSIA (CONTINUED)

MONDAY, DECEMBER 5

6:00 AM – 9:00 PM

Industry CME Satellite Symposium | Rational Polytherapy in Dravet and Lennox-Gastaut Syndromes: Current and Future Approaches

Music City Center, Davidson Ballroom B, Level 1M



CME

CME for this session is provided by Miller Medical Communications, LLC.

Dravet Syndrome (DS) and Lennox-Gastaut Syndrome (LGS) are among the most severe and most challenging developmental and epileptic encephalopathies (DEEs). One of the main differences is that DS has a well-defined genetic cause in that mutations in the SCN1A gene account for approximately 80% of cases. No single underlying cause, including a genetic mutation, has been identified for LGS. The symposium will focus on treatment approaches to DS and LGS, which include polytherapy for both syndromes including first, second, and third line treatments. Recently approved therapies and those in late stage development are changing the treatment algorithm.

This activity is supported by Takeda Pharmaceuticals.

AES Exhibit Hall 2022

Learn about the latest treatments, tools, and technologies in epilepsy and enjoy opportunities to win prizes!

Saturday, December 3

12:00 – 6:00 PM

Sunday, December 4

10:00 AM – 4:00 PM

Monday, December 5

10:00 AM – 2:00 PM

2022 PRODUCT THEATERS

Product Theaters are focused, high-value learning opportunities with the latest product and patient information direct from the source.

Find 2022 Product Theaters in the back of the Exhibit Hall

Music City Center, Hall B, Level 3

Saturday, December 3

11:30 AM – 12:30 PM

Nasal Spray Therapy for Episodes of Frequent Seizures

Sponsor: Neurelis, Inc.

Sunday, December 4

11:30 AM – 12:30 PM

Engage in problem-based learning that leverages real world data to manage uncontrolled focal seizures and side effects

Sponsor: Sunovion Pharmaceuticals Inc

1:30 – 2:30 PM

FDA-Approved treatment for seizures associated with CDKL5 Deficiency Disorder in patients 2 years of age and older

Sponsor: Marinus Pharmaceuticals, Inc.



SCIENTIFIC EXHIBITS

Company Name	Scientific Exhibit Title	Time	Room #
Sunday, December 4			
LivaNova	VNS Global Experience: Learning from the Past, Planning the Future	8:00 – 11:00 AM	Music City Center, Room 207 A/B, Level 2
Eisai Inc.	Research Updates from Eisai	8:00 – 11:00 AM	Music City Center, Room 208 A/B, Level 2
Invitae	Behind the Seizure Program AES Scientific Exhibit: Transforming Genetic Epilepsy Diagnoses and Enhancing Care Pathways via State-of-the-Art Research	8:00 – 11:00 AM	Music City Center, Room 207 C/D, Level 2
Marinus Pharmaceuticals, Inc.	Marinus Scientific Updates on Ganaxolone	2:00 – 5:00 PM	Music City Center, Room 208 A/B, Level 2
Xenon Pharmaceuticals Inc.	Scientific Exhibit of Xenon's Clinical and Research Programs: Featuring XEN1101, a Novel Potassium Channel Opener for the Treatment of Epilepsy	2:00 – 5:00 PM	Music City Center, Room 207 C/D, Level 2
Neurelis, Inc.	Recent Advancements in the Treatment of Seizure Clusters	2:00 – 5:00 PM	Music City Center, Room 207 A/B, Level 2

These exhibits offer meeting attendees an opportunity to stay up to date on the latest epilepsy-related research. Authors will be present during the exhibits.

Company Name	Scientific Exhibit Title	Time	Room #
Monday, December 5			
UCB, Inc.	UCB: Leading with Science for Epilepsy and Rare Epilepsy Syndromes	8:00 – 11:00 AM	Music City Center, Room 207 A/B, Level 2
Jazz Pharmaceuticals, Inc.	Epidiolex® (CBD) Treatment Outcomes, Safety, and Real-world Evidence	8:00 – 11:00 AM	Music City Center, Room 208 A/B, Level 2
BIOCODEX	DIACOMIT® (stiripentol): An Update on Mechanisms, Efficacy and Safety in the Treatment of Developmental & Epileptic Encephalopathies	8:00 – 11:00 AM	Music City Center, Room 207 C/D, Level 2
SK Life Science, Inc.	SK Life Science Special Scientific Exhibit and Posters	2:00 – 5:00 PM	Music City Center, Room 208 A/B, Level 2
Longboard Pharmaceuticals, Inc.	A Novel 5HT _{2C} Superagonist for Treatment of Rare Seizure Disorders: LP352 and the PACIFIC Study	2:00 – 5:00 PM	Music City Center, Room 207 A/B, Level 2
Ad-Tech Medical Instrument Corporation	MR Imaging Considerations for Patients with Multiple Neurological Implants	2:00 – 5:00 PM	Music City Center, Room 207 C/D, Level 2

Top Notch Epilepsy Professionals Don't Just Happen

Thanks to
philanthropic gifts
and bequests,
AES is a key source
for grants that
encourage the
best and brightest
to study epilepsy.

aesnet.org/impact



Gifts to AES named funds
make up an essential part
of our ability to fund the
most promising young
professionals.



A Warm AES Welcome to Advanced Practice Providers!

Thank you for joining us here in Nashville!
AES is working to expand programs tailored to the
needs and interests of APPs working in epilepsy.

Check out
these events.
Please visit the
Member Center
for details.

Friday, December 2, 10:00–11:15 AM

Friday, December 2, 1:30–3:00 PM

Friday, December 2, 7:30–9:00 PM

Saturday, December 3, 2:15–4:45 PM

Saturday, December 3, 5:30–8:00 PM

*Professional Development | Career Pathways: Interprofessional Panel
Music City Center, 208 A, Level 2*

*SIG | Clinical Epilepsy for the Advanced Practice Provider:
Subspecialty Clinic Leveraging APPs to Improve Access
Music City Center, 106 B, Level 1*

*Advanced Practice Provider Reception
Omni Nashville, Legends Ballroom, E/F/G*

*Advanced Practice Providers Symposium | Medication Dilemmas:
Practical Approaches to Pharmacological Management of Epilepsy
Karl F. Dean Ballroom A1, Level 4*

*Best Practices in Clinical Epilepsy Symposium | Access to Care for
the Underserved Managing Epilepsy
Karl F. Dean Ballroom A1, Level 4*

APPs in Epilepsy: This is where you belong.



AES Advanced Practice Provider (APP) activities at the
AES Annual Meeting are supported in part by SK Life Science, Inc.

2022 AES Fellows Program

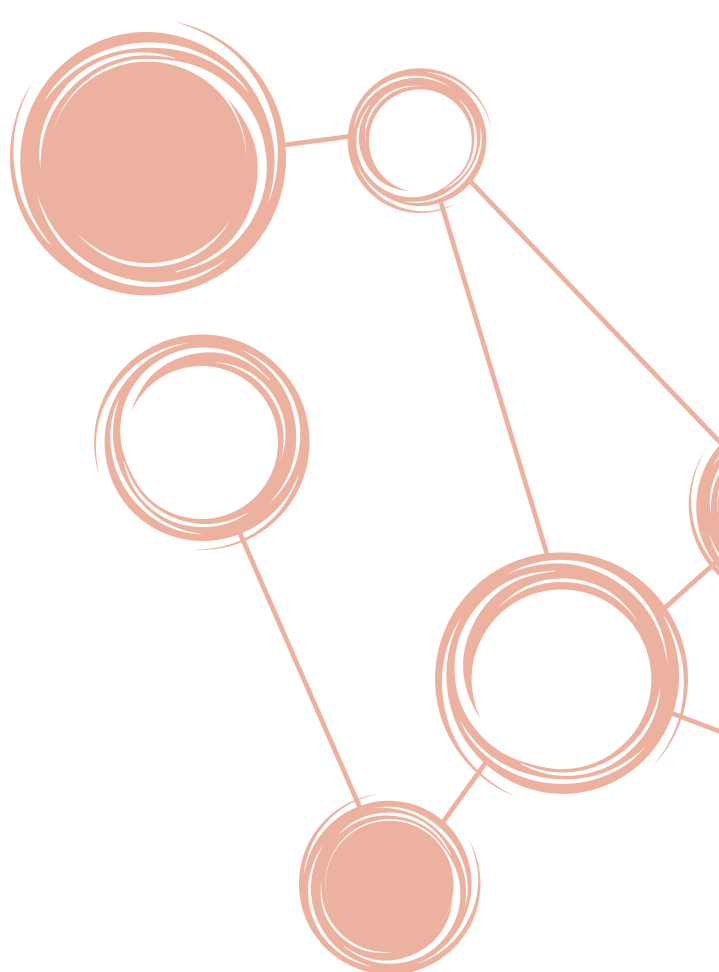
Welcome to Nashville, AES Fellows!
More than 100 clinical and postdoctoral
fellows have been given support to attend
AES 2022.

Participants will:

- Learn about advances in research and care
- Engage with expert mentors and peers
- Participate in sessions on career skills and career pathways

Recent AES Fellows Programs have been supported in part by educational grants from:

- Upsher-Smith Laboratories, LLC
- Jazz Pharmaceuticals, Inc.
- Supernus Pharmaceuticals, Inc.
- SK Life Science, Inc.





AES 2023 ANNUAL MEETING

December 1-5 | Orlando, FL

SAVE THE DATE!

2024

AES Annual Meeting
December 6-10
Los Angeles, CA

2025

AES Annual Meeting
December 5-9
Atlanta, GA

2026

AES Annual Meeting
December 4-8
Denver, CO



Moving Beyond Seizures in the Care of Patients With Pediatric-Onset Epileptic Encephalopathies

Cognitive and Behavioral Symptoms in Pediatric Epileptic Encephalopathies

FRIDAY, DECEMBER 2, 2022 | 6:30 PM – 8:00 PM CST

REGISTRATION AND DINNER: 6:00 PM | PRESENTATION: 6:30 PM

MUSIC CITY CENTER | DAVIDSON BALLROOM C, FLOOR 1M
201 REP. JOHN LEWIS WAY S | NASHVILLE, TENNESSEE



HYBRID EVENT

ACTIVITY OVERVIEW

Developmental and epileptic encephalopathies (DEEs) are syndromic in nature, with symptomatology comprising more than seizures alone. In this live hybrid symposium, Drs Anup Patel, Jay Salpekar, and Elaine Wirrell will discuss the cognitive, behavioral, and sleep symptoms associated with pediatric-onset epileptic encephalopathies and their impact and options for managing them.

Disclaimer: Opinions presented during this industry-sponsored satellite educational activity are those of the speakers and/or the sponsor and/or the accredited provider of continuing medical education, and are not a reflection of American Epilepsy Society opinions, nor are they supported, sponsored or endorsed by the American Epilepsy Society.



www.medscape.org/symposium/peds-non-seizure-outcome

MONDAY, DECEMBER 5, 2022 | 6:00 - 9:00 PM

Intermittent Rescue Therapy for Seizure Clusters: Hypothesis-Generating Observation of Change Across Time in SEIZure InterVAL (Time Between Seizure Clusters)

OBJECTIVES:

- Understand how SEIVAL was calculated for patients with seizure clusters receiving intermittent rescue therapy
- Understand the results of this observational analysis and subanalyses from a long-term safety study of diazepam nasal spray
- Describe how studies could further investigate these findings

PRESENTERS:

CHAIR:



Michael R. Sperling, MD
Thomas Jefferson University
Philadelphia, PA

PANEL MEMBERS:



Tracy Dixon-Salazar, PhD
LGS Foundation
New York, NY

PRESENTERS:



Tracy A. Glauser, MD
Cincinnati Children's Hospital
Cincinnati, OH



Danielle Becker, MD, MS, FAES
Case Western Reserve University
School of Medicine
Cleveland, OH



Jurriaan M. Peters, MD, PhD
Boston Children's Hospital
Boston, MA



John Stern, MD
UCLA Department of Neurology
Los Angeles, CA



CLOSING THE EPILEPSY TREATMENT GAP:

Old Challenges, New Opportunities

Join us for an educational session with dinner

With advances in imaging, SEEG, LITT, neuromodulation, and chronic iEEG recording, the landscape of epilepsy specialty care is poised for rapid transformation. We will discuss why the treatment gap persists and opportunities to adopt new technologies, new clinical practices, and new referral models to help improve quality of life for more refractory epilepsy patients.

SUNDAY, DECEMBER 4, 2022

@ 6:00 – 9:00 PM CT

MUSIC CITY CENTER,
DAVIDSON BALLROOM C

FLOOR 1M

201 REP. JOHN LEWIS WAY S,
NASHVILLE, TN 37203



Space is limited,
register to reserve
your spot.

[NEUROPACE.COM/
SYMPOSIUM2022](https://www.neuropace.com/symposium2022)



SPEAKER

Fedor Panov, MD*

Mt. Sinai Health System



SPEAKER

Patrick Landazuri, MD

University of Kansas Medical Center



Opinions presented during this industry-sponsored satellite educational activity are those of the speakers and/or the sponsor, and are not a reflection of American Epilepsy Society opinions, nor are they supported, sponsored or endorsed by the American Epilepsy Society.

*Fedor Panov, MD is a paid consultant

Invitation only, HCP's only. Space is limited, non-transferable. Dinner will be provided. Expenses will be reported in accordance with the Sunshine Act.

This material is intended for health care professionals. Distribution to any other recipient is prohibited. For indications, contraindications, warnings, precautions, potential adverse effects and patient counseling information for the ROSA One® Brain system, see the package insert or con-

tact your local representative; visit www.zimmerbiomet.com for additional product information. Monteris: Rx Only

Rx Only. See important prescribing and safety information in the RNS® System labeling at www.NeuroPace.com. Refer to the labeling for a description of the RNS® System and its components, indications for use, contraindications, warnings, cautions, adverse events and instructions for use.

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Join us for a CME Dinner
Symposium being held during
the American Epilepsy Society
2022 Annual Meeting

RATIONAL POLYTHERAPY IN DRAVET AND LENNOX-GASTAUT SYNDROMES

Current and Future Approaches



Monday, December 5, 2022

6:00 PM – 8:00 PM

Music City Center

Davidson Ballroom B, Floor 1M

PROGRAM CHAIR

Elizabeth Thiele, MD, PhD

*Professor of Neurology
Harvard Medical School
Director, Pediatric Epilepsy Program
Director, Herscot Center
for Tuberous Sclerosis Complex
Massachusetts General Hospital
Boston, Massachusetts*

PRE-REGISTER  <https://www.millermeded.com/DravetAndLGS>

Pre-registration does not guarantee seating. On-site registration may be available, space permitting.

This activity has been approved for AMA PRA Category 1 Credit™.

Jointly provided by Partners for Advancing Clinical Education (PACE) and Miller Medical Communications, LLC.



This live activity is supported by an independent educational grant from Takeda Development Center Americas, Inc.

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How Does Clinical Experience Become Real-World Evidence?

Expert Perspectives on
BRIVIACT® (brivaracetam) CV
Long-Term Treatment Outcomes

JOIN US FOR A DINNER SYMPOSIUM AT AES 2022!

Sunday, December 4, 2022
6:00–8:00 PM

Music City Center
Davidson Ballroom A, Floor 1M



Hina Dave, MD
Houston, Texas



Mounzer Yassin-Kassab, MD
Chattanooga, Tennessee



Pavel Klein, MD
Bethesda, Maryland



Henrik Klitgaard, PhD
Braine-l'Alleud, Belgium



Clinical trials are the backbone of medication science, but they don't tell the whole story



See how, with time and thoughtful data collection, your clinical experience could inform treatment more broadly



Experts will explore the need for and challenges with delivering high-quality real-world evidence

In accordance with the PhRMA Code on Interactions with Health Care Professionals, attendance at this program is limited to healthcare professionals. Accordingly, attendance by guests or spouses is not appropriate, and associated expenses will not be reimbursed. Certain state and federal requirements place restrictions on and/or require disclosure of items UCB provides to healthcare professionals, including meals and refreshments. UCB is committed to complying with all legal requirements.

Opinions presented during this industry-sponsored satellite educational activity are those of the speakers and/or the sponsor, and are not a reflection of AES opinions, nor are they supported, sponsored, or endorsed by AES.



Exploring Health Disparities, Inequities, and Barriers to Care for Black Patients Living With Epilepsy

JOIN US FOR A SYMPOSIUM AT AES 2022!

Friday, December 2, 2022 • 6:00–9:00 PM

Davidson Ballroom A, Floor 1M, Music City Center | Nashville, Tennessee

There are a significant number of Black Americans living with epilepsy. Inherent bias and medical mistrust may be obstacles to optimal care. Medical mistrust is related to mistreatment legacies in the United States but also stems from inequities in the ability to access insurance, healthcare facilities, and treatments. This population has unique challenges that are understudied and under-recognized, and as a result, barriers to care are often misunderstood throughout the healthcare system.

Through recognition and awareness of these factors, there are opportunities to move toward solutions to provide more equitable care, enhance patient-provider communication, address medical mistrust, and improve outcomes. Conversations to identify issues and refine the healthcare landscape are needed, and this program aims to accomplish this goal.

In accordance with the PhRMA Code on Interactions with Health Care Professionals, attendance at this program is limited to healthcare professionals. Accordingly, attendance by guests or spouses is not appropriate, and associated expenses will not be reimbursed. Certain state and federal requirements place restrictions on and/or require disclosure of items UCB provides to healthcare professionals, including meals and refreshments. UCB is committed to complying with all legal requirements.

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Join SK Life Science for an Expert-Led Symposium at the American Epilepsy Society 2022 Annual Meeting

Mark Your Calendar

Date:

Friday, December 2, 2022

Time:

6:00 PM CT

Location:

Music City Center
201 Rep. John Lewis Way South
Nashville, TN 37203

Dinner will be provided.

Room Assignment:

Music City Center
Davidson Ballroom B
Floor 1M

An Update on Pharmacological Treatments for Refractory Epilepsy and its Prevention

**Pavel Klein, MD, BChir**

Director, Mid-Atlantic Epilepsy & Sleep Center
Bethesda, Maryland

**Patrick Kwan, BMedSci, MB, BChir, PhD, FRCP**

Chair of Neurology, University of Melbourne (RMH)
Head of Epilepsy, Royal Melbourne Hospital
Melbourne, Australia

**Steve White, PhD**

Professor and Chair, Department of Pharmacy
University of Washington School of Pharmacy
Seattle, Washington

**Michael Rogawski, MD, PhD**

Professor of Neurology and Pharmacology
University of California, Davis, School of Medicine
Sacramento, California

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**STEP IN
STEP UP
STEP
FORWARD**



↘ ↗ → // // // // // // // // // // // //

Every patient deserves a chance at zero seizures

Doctor, who are you stepping forward for?

Visit **booth 900**



The *only* FDA-approved treatment specifically for seizures associated with Dravet syndrome in children as young as 6 months.

The U.S. Food and Drug Administration has approved the use of **DIACOMIT for seizures associated with Dravet syndrome** in patients 6 months and older, weighing 15 lb or more, and taking clobazam.¹

Now more patients with Dravet syndrome will have access to a Dravet-specific treatment at an earlier age and closer to their time of diagnosis.

Visit booth 611 to learn more about making the DIACOMITment.



Actual patient and caregiver

Important Safety Information

DIACOMIT (stiripentol) is indicated for the treatment of seizures associated with Dravet syndrome (DS) in patients taking clobazam who are 6 months of age and older and weighing 7 kg or more. There are no clinical data to support the use of DIACOMIT as monotherapy in Dravet syndrome. ♦ DIACOMIT can cause somnolence. Patients should be monitored for somnolence, and if it occurs, a dose reduction should be considered. Patients should be cautioned against engaging in hazardous activities requiring mental alertness, such as operating dangerous machinery or motor vehicles. ♦ DIACOMIT can cause decreases in appetite and weight. The growth of pediatric patients should be carefully monitored. ♦ DIACOMIT can cause a significant decline in neutrophil and platelet count. Hematologic testing should be obtained prior to starting treatment and then every 6 months. ♦ DIACOMIT should generally be withdrawn gradually to minimize the risk of increased seizure frequency and status epilepticus. ♦ DIACOMIT for oral suspension contains phenylalanine which can be harmful to patients with phenylketonuria. ♦ DIACOMIT can increase the risk of suicidal thoughts or behavior in patients. Patients should be monitored for emergence or worsening of depression, suicidal thoughts or behavior, and/or any unusual changes in mood or behavior. ♦ The most common adverse reactions associated with DIACOMIT in clinical trials were somnolence (67%), decreased appetite (45%), agitation (27%), ataxia (27%), weight decreased (27%), hypotonia (24%), nausea (15%), tremor (15%), dysarthria (12%), and insomnia (12%).

Reference

1. DIACOMIT[®] (prescribing information). Beauvais, France: Biocodex, Inc.; July 2022.



Please see the full DIACOMIT Prescribing Information at DIACOMIT.com or scan the QR code.