70th Annual Meeting | George R. Brown Convention Center
6th Biennial North American Regional Epilepsy Congress
Know epilepsy. Treat epilepsy. Cure epilepsy.

From best practices to breakthrough thinking, the AES Annual Meeting offers the most extensive education on everything epilepsy.

**LEARNING**
Attend the largest professional gathering on epilepsy in the world. Create an agenda to meet your specific interests from informative sessions, hands-on workshops and specialty education.

**POSTERS**
Dynamic and always popular: Poster sessions highlight the latest research and thinking. Authors present onsite making it easy to engage and interact.

**EXHIBITS**
Discover essential resources — diagnostic and treatment technologies, pharmaceuticals, scientific equipment and educational references — all in the Exhibit Hall.

**NETWORK**
The AES Annual Meeting celebrates seventy years as the definitive place to connect and collaborate with colleagues and friends. Please join us.
Your Colleagues Attend the AES Annual Meeting Every Year. Here’s Why:

“I come to the AES Annual Meeting and get cutting-edge information in epilepsy. I build relationships with people from across the country and really connect with them, learn from their experience.”

“I’m always very enthusiastic to come to the AES Meeting every year. All the major professional stakeholders in epilepsy are here: great community, very collaborative.”

“The AES Annual Meeting is a wonderful opportunity to expand my education. My hospital conducts a lot of research; the AES Meeting lets me find out what everybody else is doing.”

“It’s the best epilepsy congress in the world. I learn from the presenters and meet so many colleagues and friends. For my profession, it’s like Disneyland.”

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WHO WILL BE IN HOUSTON

- Basic Researchers
- Clinical Nutritionists
- Clinical Researchers
- Epilepsy Coordinators
- Epileptologists
- Fellows
- General Practitioners
- Geneticists
- Healthcare Administrators
- Medical Students and Residents
- Neurologists
- Neuropsychologists
- Neuroscience Researchers
- Neurosurgeons
- Nurse Practitioners
- Patient Practitioners
- Patient Advocates
- Pediatricians
- Pediatric Neurologists
- Pharmacists
- Physicians Assistants
- Psychiatrists
- Psychologists
- Registered Nurses
- Scientists
- Social Workers
- Translational Researchers
Attend the 2016 AES Annual Meeting
The AES Annual Meeting is the largest meeting and exhibition in the world for those who share the common scientific and clinical interests of epilepsy and clinical neurophysiology. The meeting attracts nearly 5,000 attendees dedicated to improving the quality of life for those dealing with epilepsy. AES is one of 108 chapters of the International League Against Epilepsy (ILAE). In 2016 AES is proud to also host the 6th Biennial North American Regional Epilepsy Congress.

Learn at Sessions Tailored to Your Experience
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.

Special Interest Groups (SIGs) — Offer education 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.

General Lectures — Recognize the accomplishments of distinguished leaders in clinical epilepsy and research. The Hoyer Lecture is delivered by an AES President Emeritus. The Lennox and Lombroso Lecture is given by an invited member who has greatly advanced the collective understanding of epilepsy.

Annual Course — Encourage 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.

Investigators Workshops — 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.

Skills Workshops — Deliver hands-on and interactive learning opportunities in focused clinical areas or basic science research skills. Attendance at each workshop is limited to a small number of participants to allow optimal interaction. Advanced registration and an additional fee are required.

Network with Your Colleagues
Peer-to-peer networking is a longstanding tradition at the AES Annual Meeting. The meeting provides a unique forum for all professionals advancing research and patient care in epilepsy, a place to readily exchange ideas, practices and experiences. Attendees often cite interacting with other professionals as a key benefit of attending the Annual Meeting.

Discover the Latest Research at Poster Sessions
Providing a forum for the latest research, poster sessions feature accepted abstracts, encouraging interaction between presenters and attendees.

<table>
<thead>
<tr>
<th>POSTER SESSIONS</th>
<th>OPEN</th>
<th>CLOSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saturday, December 3, 2016</td>
<td>Noon</td>
<td>6:00 p.m.</td>
</tr>
<tr>
<td>Sunday, December 4, 2016</td>
<td>10:00 a.m.</td>
<td>4:00 p.m.</td>
</tr>
<tr>
<td>Monday, December 5, 2016</td>
<td>8:00 a.m.</td>
<td>2:00 p.m.</td>
</tr>
</tbody>
</table>

First authors will be present each day from Noon – 2:00 p.m.
Find Valuable Resources in the Exhibit Hall

The Exhibit Hall is an integral part of the Annual Meeting experience, highlighting the latest in pharmaceuticals, publications, scientific equipment and technology relevant to the field of epilepsy. Please check online for the most recent listing of exhibitors.

To ensure safety and security, no children under 12 years of age, strollers, carriages, wheeled luggage or wheeled briefcases are allowed in the Exhibit Hall during exhibit hours.

EXHIBIT HALL

| Saturday, December 3, 2016 | Noon | 6:00 p.m. |
| Sunday, December 4, 2016 | 10:00 a.m. | 4:00 p.m. |
| Monday, December 5, 2016 | 10:00 a.m. | 2:00 p.m. |

Attend the Scientific Exhibits

AES has approved guidelines for industry-sponsored Scientific Exhibits at the Annual Meeting. Scientific Exhibits differ from traditional poster presentations in that a broad range of material can be presented as a collection of topics, such as results of various clinical trials or a thematic presentation of one aspect of drug development.

Applications for Scientific Exhibits are due Friday, July 8, 2016. Reservations are reviewed and accepted on a first-come, first-served basis until space is sold out. Send inquiries to JoLynn Amsden at jamsden@aesnet.org.

Information for International Travelers

Consulates and Embassies

Check with your local U.S. consulate or embassy to find the earliest that you may apply for a visa at www.usembassy.gov. The visa application process can take as long as eight weeks, especially for countries that are on the “State Sponsors of Terrorism List.” Attendees from these countries should start the application process at least three to four months in advance of the Annual Meeting.

Visa Application information

Applicants should first consult the U.S. Department of State’s visa appointment and processing wait times website. Important timelines and information regarding travel to the United States is available on the U.S. Government websites:

- http://www.cbp.gov/travel/international-visitors/esta
- https://travel.state.gov/content/travel/en.html

If you are experiencing significant visa delays, you are encouraged to fill out the visa survey. This will bring your case to the attention of the U.S. Department of State.

Letter of Invitation

For security purposes, letters of invitation can only be sent to individuals registered for the Annual Meeting. Please check the appropriate box online when completing your registration. A letter will be sent to your email after your registration is completed. Send any related questions to aes@experient-inc.com.

Other Helpful Information

Additional information follows to further assist international travelers.

Banking and Currency Exchange: Standard banking hours in the U.S. are Monday to Friday, 9:00 a.m. – 4:00 p.m. Select banks are open on Saturday with limited hours. Several banking institutions are within walking distance of the Convention Center.

Time Zone: During the month of December, Houston operates in the Central Standard Time Zone (GMT - 6 hours).

Electricity: Voltage in the United States is 120 (60 Hz). Outlet sockets use either a Type A plug (Class II ungrounded plug with two flat parallel prongs) or a Type B plug (Class I plug with two flat parallel prongs and a grounding pin.) European appliances require a voltage transformer.

Gratuities and Tips: Gratuities are not automatically added to restaurant bills, except in some cases for large groups. If satisfied with your service, waiters and waitresses generally are tipped 15% to 20% of the bill. Additional suggestions regarding tipping: $1 per bag for skycaps and porters; 15% of the fare for taxi drivers; $2 per night for hotel housekeepers; and $2 per service for doormen.
**Accreditation**

The American Epilepsy Society is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

**AMA Credit Designation Statement**

The American Epilepsy Society designates this live activity for a maximum of 29.25 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

**International Credits:** The American Medical Association has determined that non-U.S. licensed physicians who participate in this CME activity are eligible for a maximum of 29.25 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 29.25 hours of Category 1 credit for completing this program.

**Continuing Education for Nurses and Pharmacists**

Jointly provided by AKH, Inc., Advancing Knowledge in Healthcare, and the American Epilepsy Society

**Nurses:** Advancing Knowledge in Healthcare is accredited as a provider of continuing nursing education by the American Nurses Credentialing Center’s Commission on Accreditation. This activity is awarded 27.25 contact hours.

**Pharmacists:** Advancing Knowledge in Healthcare is accredited by the Accreditation Council for Pharmacy Education as a provider of continuing pharmacy education.

Select portions of this Annual Meeting are approved for pharmacy CE credit. Specific hours of credit for approved presentations and the Universal Activity Numbers assigned to those presentations are found elsewhere in the program materials. Criteria for success: credit is based on documented program attendance and online completion of a program evaluation/assessment.

If you have any questions about this CE activity relative to nursing and/or pharmacy CE, please contact AkH Inc at service@akhcme.com.

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**Claiming CME Credit and CME Certificates**

Attendees who registered in the following categories may claim CME or CE for the meeting: physician, health care provider, trainee, one-day and two-day. Meeting registration includes credit claiming: there is no separate fee to claim CME/CE.

**Attendance Certificate/International Attendees**

A meeting attendance certificate will be available at the registration desk for international meeting attendees on Tuesday, December 6.
GENERAL INFORMATION

Resolution of Conflicts of Interest
It is the policy of the American Epilepsy Society to ensure balance, independence, objectivity and scientific rigor. All persons involved in the selection, development and presentation of content are required to disclose any real or apparent conflicts of interest. In accordance with the ACCME Standards for Commercial Support of CME, AES implemented the mechanism of prospective peer review of this CME activity, to identify and resolve any conflicts. Additionally, the content of this activity is based on the best available evidence.

Unapproved Use Disclosure
AES 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. Food and Drug Administration 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.

Language
The official language of the Annual Meeting is English.

Meeting Attire
Dress for the Annual Meeting is business casual. Consider bringing a light jacket or sweater with you since meeting room temperatures and personal comfort levels vary.

Program Book
The final Program Book will be available at the AES website approximately two weeks prior to the Annual Meeting. The printed version will be distributed upon check-in at registration. The Program Book includes updates and additions to the educational schedule, room assignments and a complete Exhibit Hall listing.

Meeting App
The meeting app includes the program schedule, attendee directory, exhibitors, maps and an abstract index. Available in Apple iOS, Android and HTML5 versions, the app will launch at the end of November. Registered attendees will receive an email with a link to download the app once available.

Session Handouts
Handouts provided by faculty for the CME-certified sessions will be available at the AES website by late November.

Abstracts
Abstracts will be available on the AES website approximately two weeks prior to the meeting. For those who choose to submit an ePoster for the 2016 Annual Meeting, they will be available on the AES website in January.

Cyber Café
The Cyber Café will be available during Exhibit Hall hours at the Convention Center with email and Internet access, plus printing capabilities. You will be able to complete course evaluations and obtain your CME certificate online. For your convenience, WiFi will also be available in the Convention Center.
**General Information**

**Audience Response System**
AES will use an Audience Response System (ARS) in several of the symposia. Faculty will have ARS questions throughout their presentations with multiple choice answers. To participate, you will use your mobile phone to text your answer. When a question appears in a presentation, simply text your answer (a 5 or 6 digit code) to “22333”. Standard text rates will apply. The ARS allows the learner to participate in real time. Responding to these questions enhances the learning environment and provides feedback to the speaker to assure symposium learning objectives are met.

**“In Conjunction With” Meetings**
All industry and other meetings and events including alumni reunions, receptions, board meetings and committee meetings must be approved and confirmed by AES in advance. Limited meeting space will be available at the Hilton Americas Houston. Detailed guidelines including fees and allowable times will be available by the end of August on the AES website.

**No Smoking Policy**
For the comfort and health of all attendees, smoking is not permitted at any AES function. This includes educational sessions, meetings and all food functions. The George R. Brown Convention Center and all the official meeting hotels are smoke-free facilities. Please note: smoking is also not permitted in public buildings, restaurants or bars.

**Security**
AES is committed to providing a secure meeting environment. A formal security plan is developed in consultation with the security department at the Convention Center. Security procedures will also be in place for exhibition materials and all deliveries to the Annual Meeting. Additional security information will be available in the Program Book provided to attendees at the onsite registration desk.

**Press Room**
The AES Press Room provides working media a dedicated space with internet connection, plus staff available to assist with identifying experts and arranging interviews. Schedules, meeting materials and press kits are also available in the press room.

Writers, editors, photographers and producers employed by print, broadcast or digital media are able to register as press. Freelance writers may also register, but must be able to demonstrate an assignment from a media outlet.

For more information or to register as press, contact Keri Kramer at (312) 883-3800, ext. 105 or by email at kkramer@aesnet.org.

**Photography and Recording of Programs**
AES strictly prohibits all photography (flash, digital, or otherwise), audio- and/or video- recording during all educational sessions at the Annual Meeting. Violation of this policy will result in removal from the session and equipment will be confiscated.

Material presented at the AES Annual Meeting may not be reproduced in any format without the express written consent of AES. Attendees acknowledge and agree that commercial or promotional distribution, publishing or exploitation of speaker sessions, content or materials from the AES Annual Meeting is strictly prohibited unless you have received the express prior written permission from AES or the otherwise applicable rights holder.

**Photography Release**
AES uses photographs of meeting events in its promotional materials. Unless the permission is revoked in writing to AES, by virtue of their attendance, all meeting visitors agree to use of their likeness in such materials.

**Insurance/Liabilities**
AES cannot be held responsible for any personal injury, loss, damage, accident to private property or additional expenses incurred as a result of delays or changes in air, rail, sea, road or other services, strikes, sickness, weather, acts of terrorism and any other cause. All participants are encouraged to make their own arrangements for health and travel insurance.

**Program Changes**
AES cannot assume liability for any changes in the program due to external or unforeseen circumstances. For program updates, please visit the Annual Meeting website.
REGISTRATION AND HOTEL INFORMATION

One Step Registration and Reservations
Registering for the AES Annual Meeting and booking at preferred hotels is combined into a single, more convenient process. Get started by visiting the registration and housing website managed by Experient, Inc.

Full and Daily Meeting Registration Options
You must register to attend any Annual Meeting educational sessions, Exhibit Hall or social functions. Two registration options are available:

• Full Annual Meeting registration includes all five days of the meeting. All educational sessions are included except as noted below.
• One-day or two-day registration(s) include all events on the day(s) you pay to attend, except as noted below.

Events requiring an extra event fee include Skills Workshops and the 5th Annual Wine Tasting and Silent Auction. "The 30th Annual Advances in the Management of Epilepsy and the Epilepsy Clinic" is offered through Wake Forest School of Medicine for an additional fee (see page 21 for details).

Registration Fees
Register early and save. Book your hotel through Experient and save even more.

Early Bird Rate: Complete and pay for your registration by Monday, October 31, at 11:59 p.m. ET to get the best "early bird" rate. You must complete your registration by this date to receive the discount. Registrations started but not completed by the deadline will be charged the Standard/Onsite Rate.

Additional Savings: Save an additional $50 on full and two-day registrations when you confirm a hotel room through Experient. The registration discount will be applied after confirming your hotel reservation. This discount is only applicable when the meeting registration and hotel reservation are:

• Confirmed at the same time, in the same transaction
• Completed by Monday, October 31, at 11:59 p.m. ET

Additional Notes:

• The registration discount only applies to the lead occupant in the room. If there is more than one person in a room, the additional person/people is not eligible for the discount.
• The discount does not apply to one-day registrations, Resource-Limited Countries, International Group or Exhibit Hall only registration fees.

Standard/Onsite Rate: Rates increase for all registration types beginning on Tuesday, November 1, 2016, whether completed online or onsite.

AES Members: AES members receive a substantial discount on Annual Meeting registration. To receive the discount, your membership must be renewed for the 2016-2017 member year. If you are not renewed when you register, you will need to visit https://my.aesnet.org to renew. Please allow 48 business hours for your dues renewal to be reflected in the registration system.

Join AES: For those who would like to join AES and receive the member meeting discount, please complete an application at www.AESnet.org/membership. Please allow 48 business hours for your membership to be reflected in the registration system. To receive the member discount for Annual Meeting registration, you must renew or join AES so that your current member status is reflected in the registration system by Monday, October 31. Please note that the registration system requires 48 business hours to update membership status.

The Advantage of AES Membership
The American Epilepsy Society invites you to join one of the longest established professional organizations in the United States. In addition to discounts for educational programs, AES membership offers a wide-range of educational, networking and professional benefits, including:

• Subscription to the AES official journal Epilepsy Currents
• Access to AES Connect, an online community exclusively for members
• Professional development via the Epilepsy Learning Institute
• Notice of funding opportunities
• Full access to AES online resources and tools
• Registration discounts to the AES Annual Meeting

American Epilepsy Society

AMERICAN
EPILEPSY
SOCIETY
Pay by Check or Generate an Invoice
First, complete the registration process. Then, select the "Payment by Check" in the dropdown menu on the payment page. You may use the confirmation as your invoice for the balance due. Payment must be postmarked by Monday, October 31, to be eligible for discounts. Higher fees apply after this date.

Make checks payable to:
American Epilepsy Society
135 South LaSalle Street, Suite 2850
Chicago, IL 60603

Onsite Registration
Onsite registration will be open on Level 3 of the George R. Brown Convention Center during these hours:

<table>
<thead>
<tr>
<th></th>
<th>OPEN</th>
<th>CLOSE</th>
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</thead>
<tbody>
<tr>
<td>Thursday, December 1, 2016</td>
<td>5:00 p.m.</td>
<td>7:00 p.m.</td>
</tr>
<tr>
<td>Friday, December 2, 2016</td>
<td>7:00 a.m.</td>
<td>5:00 p.m.</td>
</tr>
<tr>
<td>Saturday, December 3, 2016</td>
<td>7:00 a.m.</td>
<td>5:00 p.m.</td>
</tr>
<tr>
<td>Sunday, December 4, 2016</td>
<td>7:00 a.m.</td>
<td>5:00 p.m.</td>
</tr>
<tr>
<td>Monday, December 5, 2016</td>
<td>7:00 a.m.</td>
<td>5:00 p.m.</td>
</tr>
<tr>
<td>Tuesday, December 6, 2016</td>
<td>7:00 a.m.</td>
<td>1:15 p.m.</td>
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</tbody>
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Badge Information
All badges and tickets will be printed onsite. Attendees will be required to produce government-issued photo identification prior to receiving their badge and registration materials. Badges must be worn at all times while in attendance at the Annual Meeting and are required for admittance to all meeting activities, including the Exhibit Hall. Badges are required for each individual and may not be shared.

Registration Cancellation Policy
Cancellations may be sent via email or faxed and must be received no later than Monday, November 21.

Email: aes@experient-inc.com
Fax: 888.772.1888 (Domestic) 301.694.5124 (International)

• Requests received by Monday, November 21, or earlier will receive a full refund, minus a $100 administrative fee.
• Requests made Tuesday, November 22, or later are not eligible for any refund.
• Credit card refunds: Allow 5-7 business days to be processed.
• Check refunds: Allow 4-6 weeks after the meeting concludes.
• AES does not make partial refunds for those who join, renew or book their hotel room after completing registration. To qualify for these discounts, please join AES or renew your membership prior to registering.
• To qualify for the housing discount, you must make your hotel reservation through Experient by October 31, 2016, when registering for the Annual Meeting.

Poster Presenters and Exhibitors
Poster presenters or anyone exhibiting in a booth or at a non-profit table are required to register at the appropriate registration rate.

Exhibit Hall and Poster Viewing Badge
Friends, family or colleagues wishing to view exhibits and/or posters only may purchase a one-day badge for $75, per person. This badge is only available on-site and allows access to just the Exhibit Hall and Poster Sessions. Entry to educational programming or any other AES events is not permitted.

Contributions/Donations
Please consider a tax-deductible gift to AES when you register. Donations will be used exclusively to support research, education and training programs.

Special Needs
AES welcomes attendees with special needs and fully complies with the legal requirements of the Americans with Disabilities Act and the rules and regulations thereof. If you are an attendee with special needs, please check the special needs box during online registration. Special needs arrangements should be indicated by Thursday, November 10.
### Registration Categories And Fees

<table>
<thead>
<tr>
<th>Category</th>
<th>Criteria/Description</th>
<th>CME/CE Eligible</th>
<th>Early Member</th>
<th>Early Non-member</th>
<th>Standard/Onsite</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>WITH HOUSING DISCOUNT</td>
<td>WITHOUT HOUSING DISCOUNT</td>
<td>WITH HOUSING DISCOUNT</td>
<td>WITHOUT HOUSING DISCOUNT</td>
</tr>
<tr>
<td>Physician</td>
<td>Attendees who have a medical degree, such as M.D., D.O., or M.B.B.S. and have completed training.</td>
<td>Yes</td>
<td>$685</td>
<td>$735</td>
<td>$1,285</td>
</tr>
<tr>
<td>Scientist</td>
<td>Researchers. Physicians may not register for this category.</td>
<td>No</td>
<td>$415</td>
<td>$465</td>
<td>$675</td>
</tr>
<tr>
<td>Health Care Providers</td>
<td>Professionals who care for patients, such as nurse practitioners, nurses, pharmacists, psychologists, physician assistants and technologists. Physicians may not register for this category.</td>
<td>Yes</td>
<td>$415</td>
<td>$465</td>
<td>$675</td>
</tr>
<tr>
<td>Trainee</td>
<td>Residents, fellows and postdocs.</td>
<td>Yes</td>
<td>$250</td>
<td>$300</td>
<td>$510</td>
</tr>
<tr>
<td>Coordinator/Assistant*</td>
<td>Research coordinators, and research or laboratory assistants.</td>
<td>No</td>
<td>$250</td>
<td>$300</td>
<td>$510</td>
</tr>
<tr>
<td>Student</td>
<td>Undergraduate or medical school student.</td>
<td>No</td>
<td>$105</td>
<td>$155</td>
<td>$105</td>
</tr>
<tr>
<td>Advocate</td>
<td>Staff of nonprofit in epilepsy, person with epilepsy, family member or caregiver. Physicians may not register for this category.</td>
<td>No</td>
<td>$220</td>
<td>$270</td>
<td>$220</td>
</tr>
<tr>
<td>One-Day Pass†</td>
<td>Open to all registrant categories.</td>
<td>Yes</td>
<td>N/A</td>
<td>$345</td>
<td>N/A</td>
</tr>
<tr>
<td>Two-Day Pass</td>
<td>Open to all registrant categories.</td>
<td>Yes</td>
<td>$605</td>
<td>$655</td>
<td>$860</td>
</tr>
<tr>
<td>Industry</td>
<td>Industry employees who want to attend educational programming. Physicians, scientists, and health care providers should register as such in those respective categories.</td>
<td>No</td>
<td>N/A</td>
<td>$465</td>
<td>N/A</td>
</tr>
<tr>
<td>Resource-Limited Country†</td>
<td>Individuals living and working in low-income developing countries, as defined by the World Bank.</td>
<td>No</td>
<td>N/A</td>
<td>$250</td>
<td>N/A</td>
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</table>

* Physician attendees may add an assistant/coordinator to their meeting registration; coordinators and assistants wishing to attend without a physician must register in the Health Care Provider category.
† Registration discount for booking a hotel does not apply to One-Day or Resource-Limited Country categories.
‡ Individuals residing and working in Resource-Limited Countries, as defined by The World Bank, may register online only for the five-day program at a reduced rate. Fees are determined automatically based on the country. No other discounts are available with this rate.

Items not included in the meeting registration which require an additional fee are:
- 5th Annual Wine Tasting and Silent Auction See page 30.
- Skills Workshops See pages 41-42. Pre-registration and tickets are required for these sessions. An additional $50 registration fee applies; maximum of 30 people per session.

### INTERNATIONAL GROUP REGISTRATIONS AND HOUSING

International group registrations are limited to groups of ten or more international travelers and arranged through a group coordinator. To qualify, the entire group fee must be paid in full and participant registration lists received no later than Wednesday, November 2. In addition to credit cards and checks, wire transfers are also accepted for international group registrations; a $75 fee per wire applies.

Appointments to pick up group badges will be scheduled for Thursday, December 1, between 10:00 a.m. - 4:00 p.m. for the onsite group leader. Please proceed to the AES Registration Desk at the George R. Brown Convention Center, Level 3.

Hotel reservations are handled through the AES International Group Housing. The deadline to request a block of rooms is Monday, September 26. You may submit your inquiry on the website or by emailing aes@internationalgrouphousing.com

Passport and Visa Requests: AES strongly encourages all attendees to ensure they have fulfilled all legal requirements to enter the United States. See page 8 for additional information for international travelers.
REGISTRATION AND HOTEL INFORMATION

Meeting Location
AES is pleased to host its 70th Annual Meeting in Houston, Texas. The meeting will be held at:

George R. Brown Convention Center
1001 Avenida de las Americas
Houston, Texas 77010

The George R. Brown (GRB) Convention Center ranks among the ten largest convention centers in the nation. Convention-goers in Houston will appreciate the excitement and convenience afforded by the convention center’s downtown location. GRB is surrounded by some of the most visited attractions in the city, including the Toyota Center (home to the NBA Rockets and blockbuster concerts), Minute Maid Park (home to the MLB Astros) and the 12-acre Discovery Green, one of the most innovative urban parks in the country.

The Program Book you receive onsite and meeting mobile app will contain maps and specific locations for all the Annual Meeting events. Locations for key events are:

 AES Registration: Foyer outside the General Assembly Theater (Level 3)
 Exhibit Hall and Posters: Exhibit Hall, A3 and B3 (Level 3)
 Session Rooms: Level 3
 General Sessions: General Assembly Theater (Level 3)

The AES headquarters hotel, Hilton Americas Houston, is connected to GRB via two skybridges from the second and third floors of the hotel.

About Houston
As the nation’s fourth-largest city, Houston is a melting pot of peoples and cultures, a dynamic community of world-class art, entertainment, food and attractions.

The city is considered to have one of the best culinary scenes in the country, serving dishes from more than 70 countries and American regions. Venture downtown to discover a thriving professional arts scene, with professional resident companies in ballet, opera, symphony and theater. And the nearby Museum District stakes its claim as the country’s fourth largest, with 18 cultural powerhouses set within blocks of one another.

Much more can be found online.

Getting to Houston
By Plane: The greater Houston area is served by two airports with hundreds of flights daily.

  • Approximate taxi fare from IAH is $52 to downtown area.
  • Super Shuttle service is available; for fare quotes and reservations go to www.supershuttle.com.

William P. Hobby Airport (HOU) serves domestic destinations and has seen significant increases in passenger numbers in recent years. Airlines serving Hobby Airport are AirTran Airlines, American Airlines, Delta Air Lines, Frontier Airlines, JetBlue Airways, and Southwest Airlines.
  • Approximate taxi fare from HOU is $26 to downtown area.
  • Super Shuttle service is available; for fare quotes and reservations go to www.supershuttle.com.

By Train: The Sunset Limited runs along Amtrak’s Southern-most route from New Orleans to Los Angeles. This includes a stop in Houston where the train departs towards California on Mondays, Wednesdays and Saturdays and towards Louisiana on Tuesdays, Fridays and Sundays. The station is located at 902 Washington Avenue in Houston.

By Car: Houston is well served by a system of radial and ring highways that provide excellent access to other regions in Texas and beyond. The city lies at the crossroads of Interstates 10 and 45 connecting to cities from Florida to California and from the Gulf of Mexico all the way up to the Canadian border.

Getting Around Downtown Houston
By Taxi: The City of Houston has authorized a flat taxi fare of $6 for all trips in the downtown area. This $6 fare will apply anywhere within the Central Business District, bounded by Interstate 45, Interstate 10 and U.S. 59. No surcharges will apply to the fare, which can accommodate multiple riders under the $6 total rate.

By Bus: Greenlink is a free bus service within downtown Houston. Greenlink buses stop at popular downtown destinations including Green Street, George R. Brown Convention Center, Discovery Green, Main Street Square, City Hall and the Central Library. Greenlink Buses connect to Metro Park & Ride services and to the Main Street METRORail line.
Preferred Hotels

Using a preferred hotel offers you easy access to the Annual Meeting. These hotels also offer a discounted rate and help offset overall meeting expenses.
**Preferred Hotels**

1. **Hilton Americas Houston - AES Headquarters Hotel**
   1600 Lamar Street
   Houston, Texas 77010
   Rates: $175 Single or $185 Double (plus tax)
   Check-in: 3:00 p.m. Check-out: Noon
   Connected to the George R. Brown Convention Center via two indoor skywalks, this 1,200-room conference hotel is a short walk from all the meeting activities.

2. **Embassy Suites Houston - Downtown**
   1515 Dallas Street
   Houston, Texas 77010
   Rates: $199 Single or $219 Double (plus tax)
   Check-in: 3:00 p.m. Check-out: Noon
   All accommodations are two-room suites offering a private bedroom and separate living area. Enjoy a complimentary daily cooked-to-order breakfast each morning and manager’s reception each evening. The hotel also offers complimentary in-room internet access for guests booked within the AES room block, access to fitness amenities and the pool.

3. **Hampton Inn / Homewood Suites Houston**
   710 Crawford Street
   Houston, Texas 77002
   Rates: $189 Single or Double (plus tax)
   Check-in: 3:00 p.m. Check-out: Noon
   These two hotels share the same address and are located within two blocks of the George R. Brown Convention Center. Guests may enjoy complimentary hot breakfasts, served daily along with in-room internet access and access to the fitness center.

4. **Four Seasons Hotel Houston**
   1300 Lamar Street
   Houston, Texas 77010
   Rates: $205 Single or Double (plus tax)
   Check-in: 3:00 p.m. Check-out: Noon
   This five-star, 20 story, upscale hotel is located three blocks from the Convention Center. Amenities include complimentary in-room internet access for guests booked within the AES room block and car service to explore the downtown area. Additional amenities include an Italian restaurant and a lobby lounge. There’s also a fitness center, spa and business center.

5. **Courtyard Houston Downtown**
   916 Dallas Street
   Houston, Texas 77002
   Rates: $169 Single or Double (plus tax)
   Check-in: 3:00 p.m. Check-out: Noon
   Located in the city’s historic 1921 Humble Oil building the newly renovated rooms and suites feature high ceilings and natural light, along with modern décor and mini-refrigerators. The METRORail is right outside the hotel. Complimentary Wi-Fi is offered throughout the hotel along with use of the fitness center.

6. **Springhill Suites Houston Downtown**
   914 Dallas Street
   Houston, Texas 77002
   Rates: $169 Single or Double (plus tax)
   Check-in: 3:00 p.m. Check-out: Noon
   The most recent member of the Houston Downtown Marriott Center complex, this all-suite hotel opened in August 2015 within the historic 1921 Humble Oil building. Amenities include a complimentary hot breakfast buffet, state-of-the-art fitness center and in-room Wi-Fi.

7. **Residence Inn Houston Downtown**
   904 Dallas Street
   Houston, Texas 77002
   Rates: $169 Single or Double (plus tax)
   Check-in: 3:00 p.m. Check-out: Noon
   The all-suite hotel is also located in the historic 1921 Humble Oil building. Accommodations include full kitchens, coffeemakers and complimentary Wi-Fi. Enjoy a complimentary hot breakfast and manager’s reception daily along with an exercise room and business center.

8. **Hyatt Regency Houston**
   1200 Louisiana Street
   Houston, Texas 77002
   Rates: $159 Single or Double (plus tax)
   Check-in: 3:00 p.m. Check-out: Noon
   The Hyatt Regency Houston is connected to high-end shops, restaurants and services via the city’s seven-mile underground tunnel. Amenities include a state-of-the-art StayFit™ Gym, full-service concierge and FedEx® Business Center. Basic Wi-Fi access is available in sleeping rooms; high speed is available at an additional charge.
**Hotel Reservations**

AES has again contracted Experient, Inc., for hotel reservation services. Confirm, modify or cancel your hotel reservation in real time, 24/7 at the online registration and housing site. Rooms are available on a first-come, first-served basis. Save an additional $50 on your registration fee when confirming a hotel; see Additional Savings on page 12 for details.

**Reservation Confirmations**

Automated confirmations are sent immediately to your email address unless the reservation is waitlisted. If you have not received your confirmation, please check your email spam folder for messages from Experient. You may also contact Experient with questions at 800.974.9769 (domestic) or 847.996.5892 (international) or by email at aes@experient-inc.com.

**Waitlists**

Each year, the AES headquarters hotel is a popular place to stay; rooms sell out quickly. However, availability continues to change. To be placed on a waitlist for the headquarters or any other preferred hotel, first select an available hotel. Then, click the "Room Request" box at the bottom of the "Room Occupants" page and enter the name of your preferred hotel. The Housing Bureau will do everything possible to confirm your first choice. Please be advised that waitlists are not guaranteed to clear.

**Housing Deadlines**

The deadline for individual hotel reservations is Monday, November 7. The deadline for group reservations — ten or more rooms — is Monday, October 3. You are encouraged to make your hotel reservations early, as rooms may sell out prior to these dates.

**Room Deposit/Cancellation Policy**

A credit card (American Express, Diners Club, Discover, MasterCard or VISA) is required to guarantee a reservation. After Monday, November 21, a one night, non-refundable deposit (room and tax) representing the first night of your reservation will be charged to your credit card.

Changes can be made to your reservation online or through the AES Housing Bureau until Monday, November 21, based on availability. Please contact your hotel directly after this date. Guests are responsible for all nights reserved, regardless of actual arrival or departure dates.

**Early Departure Policy**

Guests who check out of the hotel prior to the scheduled departure date will be charged a penalty of one night’s room rate and tax.

**Additional Hotel Information**

- Check the arrival and departure date on your reservation confirmation to be sure you’ve requested the correct dates. Note: If you do not arrive at the hotel on the confirmed date, the hotel may resell your room and you will be charged the amount equal to one night’s room charge, plus tax.
- The current hotel room tax rate is 17.5%. This rate is not included in the hotel rate and is subject to change.
- Hospitality suites are subject to availability. Please contact Experient for layouts and rates. Hospitality activities must not conflict with official AES meeting activities. Guidelines for “In Conjunction With” (ICW) meetings will be available at the AES website by the end of August 2016.
- AES is only able to assist guests with reservations if they have booked accommodations through Experient.
- Reservations will not be accepted directly by participating hotels or AES.

A portion of the room rate at each hotel will be used to offset meeting expenses. Confirming your room using a preferred hotel allows AES to maintain consistent and competitive registration, exhibit space and other service fees from year to year. AES is financially liable if contractual obligations are not met. Therefore, everyone is encouraged to use the discounted hotel programs available through Experient.

**Registration and Housing Customer Service**

- **WEBSITE**: Online Registration And Housing [Click Here](#)
- **PHONE**: 800.974.9769 (US and Canada) 847.996.5892 (International)
  Available Monday – Friday 9:00 a.m. – 5:00 p.m. (CT)
- **EMAIL**: aes@experient-inc.com
8:30 a.m. – 11:30 a.m.
Epilepsy Specialist Symposium | Choosing from the Feast of Epilepsy Surgery Procedures: How Do We Decide the Best Course for Each Patient?

OVERVIEW
This symposium addresses the educational need for a contemporary survey of the constellation of invasive approaches to the medication-refractory epilepsy, and the ways in which different approaches might be selected or sequenced in order to provide optimal benefit for individual patients. The format will include an illustrative case presentation, a brief review of historical and recent surgical approaches, a mixed didactic and debate format including current understanding of neuropsychological outcomes and a panel discussion. Technical details of responsive neural stimulation and anterior thalamic stimulation will be minimal because of extensive attention paid to these techniques elsewhere at this meeting. Vagus-nerve stimulation will not be discussed.

LEARNING OBJECTIVES
Following participation in this session, learners should be able to:

• Delineate and describe the possible invasive choices for individual patients with medically refractory epilepsy so as to optimize the complex trade off among maximum benefit, minimum morbidity and minimum number of procedures.

• Educate patients that physicians must make trade-offs in recommending the best approach for their individual circumstances.

• Delineate their role in the new and more complex terrain of epilepsy surgery which makes said role more challenging and potentially more important.

TARGET AUDIENCE
Intermediate and Advanced

PROGRAM
Introduction and Case Presentation
Charles Epstein, M.D.

Overview of Current Invasive Procedures
S. Kathleen Bandt, M.D.

Cognitive Morbidity
Robyn Busch, Ph.D., and Daniel Drane, Ph.D.

Mesial Temporal Lobe Epilepsy, Minimal
Robert Gross, M.D.

Mesial Temporal Lobe Epilepsy, Maximal
Michael Sperling, M.D.

Hypothalamic Hamartomas, All Approaches
Daniel Curry, M.D.

Hypothalamic Hamartomas, Controversies in Candidate Selection
TBA

Extra-Temporal Lobe Epilepsy, Minimal
Ryder Gwinn, M.D.

Extra-Temporal Lobe Epilepsy, Maximal
Steven Roper, M.D.

Case Outcome and Panel Discussion: Making the Best Decisions
All Faculty

EDUCATION CREDIT
3.0 CME Credits
This activity is eligible for ACPE and ANCC credit; see final CPE/CE activity announcement for specific details.

AES FELLOWS PROGRAM
The AES Fellows program encourages epilepsy fellows in training to attend the AES Annual Meeting, where they will learn about advances in epilepsy care and research and have opportunities to engage with expert mentors and peers. Program activities include a pre-meeting dinner with the AES Board of Directors, breakfast and lunch with mentors and career panel sessions highlighting a variety of career paths for clinicians and researchers. In addition, Fellows attend the Epilepsy Specialist Symposium, the Annual Fundamentals of Epilepsy Symposium and the Hoyer Lecture.

Application forms will be available on the AES website, www.AESnet.org, by mid-July. Approximately 95 fellows will be accepted, including clinical fellows from approved epilepsy fellowship programs in the U.S. and Canada, plus up to 15 postdoctoral researchers and fellows in professional fields such as nursing, pharmacology and psychology. Nominations are limited to one fellow or trainee per institution or fellowship program, and priority will be given to first time attendees. Accepted participants receive a travel stipend, complimentary meeting registration and a one-year AES membership.

Funding for the 2016 AES Fellows program will be provided by industry supporters to be announced.
This intensive one-day conference is designed for those 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 Department of Neurology 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.

Registration for this program is done separately from the AES Annual Meeting and begins on September 2, 2016. Register by calling Wake Forest School of Medicine at 800.642.0500.

This activity has been approved for AMA PRA Category 1 Credit™. Wake Forest is the accrediting entity.

### OVERVIEW

This session will review the 2014 new definition of epilepsy, the new International League Against Epilepsy (ILAE) classification of seizures and epilepsy (these are official ILAE positions), the presentation and prognosis of acute symptomatic seizures and possible scientific underpinnings of the definition and classification of seizures. Participants will become familiar with application of the definition of epilepsy and new classification system for seizures. Familiarity with these areas will allow better determination in practice of who has epilepsy, who has outgrown it, what type of seizures they have and when are seizures "reactive."

### LEARNING OBJECTIVES

*Following participation in this symposium, learners should be able to:*

- Review and discuss the ILAE definition of epilepsy and how it impacts clinical practice.
- Differentiate between epilepsy and an epilepsy syndrome.
- Recognize when a seizure is precipitated by an antecedent event rather than being an unprovoked seizure.
- Classify seizures according to the ILAE Operational Classification of Seizure Types system.

### TARGET AUDIENCE

Intermediate
Interested in enlarging your circle of professional connections? Make plans to attend this special session by AES. Learn how to take full advantage of the networking opportunities available at the meeting to grow your network.

Epidemiology | Access and Utilization of Health Care for Patients with Epilepsy

Coordinators: Christine Baca, M.D., M.S.H.S., and Zachary Grinspan, M.D.

Using different data sources and methods (big administrative, prospective observational, qualitative and implementation based), this session will address how different non-disease related factors (i.e., race/ethnicity, socioeconomic status, residence, language, health insurance, health beliefs and preferences) can be associated with access to and utilization of different types of health care and outcomes for people with epilepsy.

Global Health in Epilepsy | Get Involved!

Coordinators: Sheryl Haut, M.D., and Dave Clarke, M.B.B.S.

Participation in epilepsy-related global health projects is exciting, productive and important! Many people are still unaware of the possible avenues to pursue global health. This SIG will focus on opportunities for international collaborations, professorships and partnerships around the world, both in person and via telemedicine. The speakers will discuss challenges across different regions, successes and lessons learned. Areas to be highlighted include ILAE supported activities such as the Partnering Epilepsy Centers in the Americas (PECA) program of the North American Commission of the ILAE, epilepsy care in the Caribbean, epilepsy surgery project in Peru and visiting professorship programs in Africa.

Neurostimulation/Epilepsy and Engineering | Technical and Clinical Considerations in Conducting Human Microelectrode or High-density Intracranial Recordings

Coordinators: Catherine Schevon, M.D., Ph.D., and William Stacey, M.D., Ph.D.

An increasing number of centers are conducting high-density or microelectrode studies in epilepsy patients undergoing invasive EEG recordings. These recordings are valuable for a broad range of epilepsy and cognitive neuroscience investigations. The session will provide a review of technical and clinical issues that are likely to be encountered. These range from environmental and equipment issues that can impact recording quality, interactions between research and clinical recording systems, patient safety concerns and handling of the resulting large data sets. Format will be short talks followed by a panel discussion with audience participation encouraged.

Surgical | Battle Royale II: Stereo EEG vs Subdural Electrodes

Coordinators: Saadi Ghatan, M.D., and Gerald A. Grant, M.D.

Building on the success of last year's session, the discussion continues on difficult surgical cases that could be undertaken with either approach. StereoEEG is gaining popularity in the United States, and both European and American experts in the field are invited to participate in the debate over the efficacy and utility of each approach.

Translational Research | Conducting Translational Research: Challenges, Realization and Recognition

Coordinators: Andrew J. Cole, M.D., and Martha Morrell, M.D.

Taking a promising therapy from bench to bedside requires a network of collaborators, a timeline of years, a variety of funding sources and a willingness to accept the risk that such significant effort might not lead to a realized treatment. The risk is mitigated when the investigator selects collaborators with the right skill sets and experience, when consortium organization and management are well thought and when a long-term regulatory strategy is included in the earliest clinical trial considerations. Finally, academicians who wish to pursue translational research must be recognized and rewarded for efforts that are quite different from lab based and single center clinical research. Specific learning objectives: 1) provide concrete advice about how to establish a translational research consortium, including identifying the investigators and funding and managing start-up efforts; 2) stress the importance of considering the potential regulatory pathway when designing the earliest clinical trials; and 3) discuss how investigators engaged in translational research can receive career recognition for their collaborative efforts.
FRIDAY, DECEMBER 2, 2016

3:15 p.m. – 4:00 p.m.
Career Pathways in Epilepsy Care and Research

This session will highlight a variety of career paths, with two concurrent panels targeting epilepsy clinicians and researchers. Each panel will represent career options in different sectors, such as private practice, academia, industry, non-profit organizations and government. Panelists will describe their work, provide advice to those interested in similar careers and answer questions from the audience. This session is open to all meeting attendees, but may be of particular interest to residents, fellows and others at an early career stage or considering a transition.

3:30 p.m. – 6:00 p.m.
Spanish Symposium | How to Evaluate and Ameliorate the Treatment Gap in Epilepsy: Important Considerations for Spanish-speaking Countries
Presented in Spanish.

OVERVIEW
Epilepsy is estimated to affect over 60 million people worldwide, the majority of whom live in low and middle-income countries where access to medical treatment is limited. Cost-effective epilepsy treatments are available and an accurate diagnosis can be made without much technological equipment. Nonetheless, a vast majority of individuals with epilepsy in many resource-poor regions do not receive treatment. Anecdotal and descriptive estimates suggest a treatment gap of more than 80% in many low-income countries. In recent years, many countries have undertaken initiatives to decrease the epilepsy treatment gap, notably the demonstration projects such as the Global Campaign Against Epilepsy, conducted jointly by the International League against Epilepsy, the International Bureau for Epilepsy and the World Health Organization. However, measuring the gap, defined in simple terms as the proportion of people with epilepsy who require treatment but do not receive it, is challenging. There are numerous methodological issues to be considered and many cultural, demographic, economical and logistical factors that evidently influence this treatment gap and are themselves difficult to assess. This symposium will address the gaps in primary care, pharmacological and surgical care as well as in social acceptance and development in epilepsy as related to specific social, economic and political conditions in Spanish-speaking countries.

LEARNING OBJECTIVES
Following participation in this session, learners should be able to:

• Define the term “treatment gap” and describe the relative impact regarding current practices in pharmacological treatment, neurophysiologic resources and surgical treatment of epilepsy in Spanish-speaking countries that contribute to this gap.
• Describe standardized methods for measuring the aforementioned treatment gap.
• Delineate the specific cultural, economic and social factors identified in Spanish-speaking countries that contribute to this treatment gap.
• Review and discuss strategies for reducing this treatment gap in Spanish-speaking countries.
• Differentiate between strategies at the biological, social and economic levels that should be adapted or even copied from higher income countries and actions that must necessarily take specific circumstances into account and must be developed locally.

TARGET AUDIENCE
Basic

PROGRAM
Introduction
Mario A. Alonso Vanegas, M.D.

Treatment Gap, How Can It Be Qualified and Quantified? How Do We Stand in Spanish-speaking Countries?
Jorge Burneo, M.D., M.S.PH.

Pharmacological Treatment Gap in Spanish-speaking Countries
Juan Jesús Rodríguez Uranga, M.D.

Neurophysiology Resources Gap in Spanish-speaking Countries
Silvia Kochen, M.D.

Surgical Treatment Gap in Spanish-speaking Countries
Jorge Álvaro González-Martínez, M.D., Ph.D.

Conclusions
David King-Stephens, M.D.

EDUCATION CREDIT
2.5 CME credits
This activity is eligible for ANCC and ACPE credit; see final CPE/CE activity announcement for specific details.
Acute Intracranial Hemorrhage and Seizures | Acute Cerebrovascular Disease and Acute Seizures
Coordinators: Douglas Labar, M.D., Ph.D., and David Chuang, M.D.

There is great clinical and conceptual interest in the interface of epileptic and cerebrovascular illnesses. This session will center on seizures in the setting of acute intracranial hemorrhages.

Presentations and speakers:

- EEG and Seizures after Subarachnoid Hemorrhage with Aneurysm Coiling - Peter Forgacs, M.D.
- From Ubiquitous Antiseizure Medication Prophylaxis to Targeted Seizure Treatment in Acute Subarachnoid Hemorrhage - Matthew Maas, M.D., and Elizabeth Gerard, M.D.
- Choice of Antiepileptic Drugs in Acute Subdural and Intraparenchymal Hemorrhages - Jong Woo Lee, M.D., Ph.D.

Ictal Semiology | Detailed Examination of Seizure Semiology to Determine Onset and Spread of Ictal Discharges
Coordinators: Andrew Bleasel, M.B.B.S., Ph.D., and Philippe Kahane, M.D., Ph.D.

This popular SIG presents clinical cases 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 four to six cases of typical or unusual seizures. Format: one short slide of presentation, one video, discussion, one slide showing the explanation. After showing each video member of the audience will be invited to describe and analyze seizure semiology and to form hypotheses of seizure onset and spread. The faculty will comment on the material with brief discussion of particular clinical features. The presenter will give the final explanation based upon neuroimaging, intracranial EEG and the surgical outcome. Brief didactic material is delivered to end 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.
**Neuroendocrinology | Neuroendocrine Aspects of Sleep in Epilepsy**

*Coordinator: D. Samba Reddy, Ph.D., R.Ph.*

Sleep plays an intricate role in epilepsy. Sleep can affect the frequency and occurrence of seizures. Nearly 35% of U.S. adults are not getting the recommended seven hours of sleep every night. Sleep deprivation is a trigger of seizures in many persons with epilepsy. It is well-known that seizures are very sensitive to sleep patterns. Some patients have their first seizure or repeated seizures after an “all-nighter” at college or after not sleeping well for long periods. Sleep can affect seizures in many different ways. During normal sleep-wake cycles, changes in the brain’s electrical and hormonal activity occur. These changes can be linked to patterns of sleep and seizures. Some forms of epilepsy are especially prone to sleep problems. On the contrary, sleep may not be a common trigger, or the association is less clear in some patients. Despite the complexity of the sleep-seizure relationship, the prognosis is a favorable one for patients with sleep disorders and epilepsy. Yet improving sleep and optimizing seizure control can have significant positive effects on the quality of life of these patients. There are many outstanding questions on sleep and epilepsy. How can sleep deprivation trigger an epileptic seizure? How do circadian and hormonal changes influence sleep pattern and seizure occurrence? Can hormones or sleeping pills help with sleep in epilepsy? The 2016 Neuroendocrinology SIG session will discuss these and many other questions through expert presentations and panel discussion, with an emphasis on sleep clock, hormone changes, risk factors and possible prevention strategies.

**Neuroimaging | The “Normal-appearing” White Matter in Focal Epilepsy: From Pathology to Imaging**

*Coordinators: Neda Bernasconi, M.D., Ph.D., and Boris Bernhardt*

Speakers will discuss white matter anomalies in temporal lobe epilepsy and focal cortical dysplasia. They will present the most recent findings derived from histology, ex vivo and in vivo MRI and connectomics.

**Nursing | Conducting Nursing Research, Part 2**

*Coordinators: Tara Myers, CPNP, and Wendy Miller, Ph.D., RN, CCRN*

Last year’s SIG focused on literature review, evidence-based practice skills and the nursing research process. Building on that discussion, this year’s session will delve further into the details of conducting research. Attendees will learn about research methods, implementation and evaluation.

**6:00 p.m. – 7:30 p.m.**

**Basic Science Skills Workshop**

*Pre-registration and tickets are required for this session. An additional $50 registration fee applies; maximum of 30 people per session.*

**EEG Analysis and Seizure Detection in Experimental Models**

*Moderators: Brian Litt, M.D., and Edward H. Bertram, M.D.*

This interactive workshop for basic scientists will focus on the analysis of EEG data obtained from animal models of epilepsy, with an emphasis on approaches to seizure detection.
**Junior Investigators Roundtable Discussions**

This session will provide an opportunity for junior investigators to connect with each other, senior investigators and other experts in an informal setting. Roundtable topics will address a range of issues, such as navigating the job market, managing a lab and funding and communicating your research. Space will be available for general networking as well.

**Putting the “Public” Back in Health: Resources and Opportunities Available to People with Epilepsy**

*Moderators: Rosemarie Kobau, M.PH., MAPP, and David Labiner, M.D.*

The 2012 seminal report on epilepsy by the National Academy of Medicine (formerly the Institute of Medicine), galvanized epilepsy stakeholders to advance public health action on epilepsy. This report stimulated projects to expand epilepsy surveillance, refocus attention on co-morbidities, explore new care models, emphasize improved access to care and quality of care and facilitate research collaboration. The report also stressed the need for more impactful public and professional education about epilepsy and highlighted opportunities for public health action for epilepsy stakeholders. In response, AES and CDC coordinated this new educational session on utilizing existing public health resources to expand epilepsy programs, services and outcomes to benefit people with epilepsy. Note: Participants will be able to enroll onsite for ongoing technical assistance with a CDC Epilepsy Program Community of Practice.

**LEARNING OBJECTIVES:**

*Following participation in this session, learners should be able to:*

- Identify federal, state, and local public health systems relevant for epilepsy stakeholders.
- Delineate public health partners that epilepsy stakeholders can connect with to advance epilepsy surveillance, research and quality of care.
- Describe other chronic disease prevention models supported by federal, state or local public health systems.
- Discuss reimbursement mechanisms that can be employed to provide preventive care, patient education and self-management for other chronic diseases.

**Basic Mechanisms and Neuroscience | From Channels to Vesicles to Synapses**

*Coordinators: Katty (Jing-Qiong) Kang, M.D., Ph.D., and Joaquin Lugo, Ph.D.*

Mutations in multiple genes have been associated with epilepsy in humans. These genes have diverse biological functions, which have changed our traditional view of epilepsy as a “channelopathy.” This session will provide an update of discoveries in human patients and related animal models that give insights into how disruptions in different cellular events lead to epilepsy.

**Critical Care Epilepsy | What’s New in Clinical Research**

*Coordinators: Cecil Hahn, M.D., and Howard Goodkin, M.D., Ph.D.*

This year’s SIG will begin with a data blitz of three high-impact abstracts submitted to the meeting that highlight important new clinical research advances in critical care epilepsy. Following this, two established investigators will discuss recently completed or ongoing clinical trials, highlighting the study design, progress and pitfalls.

**Dietary Therapies for Epilepsy | Is The Ketogenic Diet Really Worth It? Clinical Challenges of the Ketogenic Diet and an Update on Mechanistic Research Providing Potential Therapeutic Targets**

*Coordinators: Timothy Simeone, Ph.D., and Amy Kao, M.D.*

As the population of patients who continue on dietary therapies long-term (such as glucose transporter deficiency syndrome, pyruvate dehydrogenase deficiency) increases, the potential for long-term side effects becomes a more critical issue. This session will discuss these long-term risks, challenges of research and monitoring and the benefit of collaborating with other subspecialties to develop rational clinical protocols. In a medical climate that is increasingly challenged financially, there are also significant challenges to program development; strategies for overcoming these issues will be discussed and solicited. Clinical difficulties with dietary therapies contribute to the motivation for research into the mechanisms of dietary therapies. Therefore, we will also hear about the latest mechanistic research with emphasis on identification of viable targets with greatest therapeutic potential. Clinical and basic science segments will each be followed by a short panel discussion.
Frontal Lobe | Frontal Lobe Structure and Function in Focal and Generalized Epilepsies

Coordinators: Andrea Bernasconi, M.D., and Neda Bernasconi, M.D., Ph.D.

This session will cover new research aimed at understanding the structure and function of the frontal lobe across various epilepsy syndromes.

Genetics | Variant Fight Club 2: The Dark Side of Genetics

Coordinators: Tara L Klassen, Ph.D., and Eric Marsh, M.D., Ph.D.

In this session, the first speaker will present the landscape of genetic complexity within molecular diagnostics and highlight concerns, considerations and approaches used to translate this information into clinical risk prediction. The second speaker will use experience in the genetics clinic to discuss where complex genomic profiles have confounded risk prediction. In addition, the audience will be invited to submit cases for consideration and discussion building on the framework from last year's SIG on Pathogenic Variant Interpretation and Utility. Substantial time will be designated for discussion and conversation among the attendees.

Neonatal Seizures | Neonatal Epileptic Encephalopathies

Coordinators: Tim Benke, M.D., Ph.D., and Courtney Wusthoff, M.D.

This SIG will have a roundtable discussion of emerging knowledge of neonatal onset epileptic encephalopathies, including genotype/phenotype correlations, treatment options and clinical testing considerations. The panel will include three - five speakers, each with expertise in a different specific disease (CDKL5, KCNQ2, etc.)

8:30 a.m. – 11:45 a.m.

Presidental Symposium | Epilepsy Care: A Futurist View

OVERVIEW

This session will begin by outlining the current state of epilepsy diagnosis and treatment, then identify existing roadblocks and speculate on future trends. Key topics for the current and future management of epilepsy will include: 1) existing, new and future approaches to epilepsy surgery and devices; 2) development of new antiepileptic and antiepileptogenic medications; 3) how understanding molecular mechanisms in signaling pathways like mTOR, and new and future gene discoveries will influence diagnosis and treatment; 4) how the expanding field of bioinformatics will influence decision making now and in the future; and 5) how current and future brain imaging methods will be applied to epilepsy.

LEARNING OBJECTIVES

Following participation in this session, learners should be able to:

- List several molecular pathways that may be altered in people with epilepsy and identify existing treatment(s) that can be applied.
- Describe the process for the development of new antiepileptic drugs.
- Delineate the risks and benefits of the currently available surgical approaches to treating people with epilepsy.
- Employ bioinformatic methods to create performance improvement projects with existing clinical data.
- Select the appropriate currently available bioimaging technique(s) to optimize diagnosis and treatment for people with epilepsy.
- Describe how current and future brain imaging methods can supplement and enhance neuropsychological evaluation and outcomes.

TARGET AUDIENCE

Intermediate and Advanced

PROGRAM

Introduction
Michael Privitera, M.D.

Harnessing the Power of Bioinformatics in Epilepsy
Tracy Glauser, M.D.

Brain Imaging in Epilepsy Now and in the Future
Jerzy Szafiarski, M.D., Ph.D.

Current and Future Trends in Development of Antiepileptic Drugs
Henrik Klitgaard, Ph.D.

Genes and Signaling Pathways: Future Therapeutic Strategies
The Fritz R. Dreifuss Lecture
Peter Crino, M.D., Ph.D.

Current and Future Approaches to Surgery and Sevices for Epilepsy
Dennis Spencer, M.D.

Conclusions
Michael Privitera, M.D.

EDUCATION CREDIT

2.75 CME credits

This activity is eligible for ACPE and ANCC credit; see final CPE/CE activity announcement for specific details.

American Epilepsy Society | www.AESnet.org | Houston, Texas

70th Annual Meeting | 6th Biennial North American Regional Epilepsy Congress
OVERVIEW
The treatment spectrum of “risky” seizure scenarios from seizure clustering to status epilepticus encompasses a wide variation in recognition of these clinical entities as well as treatment approaches. This symposium will discuss the newest definitions of these entities and the evidence-based guidelines for treating convulsive status epilepticus, as well as treatments for seizure clusters, periodic patterns and subclinical seizures in critically ill patients, and outlying conditions that present as status epilepticus, including neuroinflammatory states. The pathophysiologic underpinnings for the spectrum from seizure clustering to epileptiform patterns in critically ill patients to status epilepticus will be discussed. Treatment algorithms will be presented for each of these “risky” scenarios, with the educational goals of early recognition, identification of the risks of progression and rapid institution of appropriate treatments.

LEARNING OBJECTIVES
Following participation in this session, learners should be able to:

• Recognize seizure emergencies, impending seizure emergencies (cluster seizures) and complex potentially epileptic clinical scenarios and have a treatment approach in mind so that patients are treated as quickly and appropriately as possible.

• Assist in the rapid identification of seizure emergencies, impending seizure emergencies (cluster seizures) and complex potentially epileptic clinical scenarios; select appropriate treatment approaches so patients are treated as quickly as possible.

• Delineate the uses of interventions for seizure emergencies and clusters and enable their availability in the appropriate clinical settings.

• Describe the perception of seizure clustering by patients and by providers and assist in overcoming the barriers to increased use of seizure rescue strategies outside the hospital.

TARGET AUDIENCE
Basic, Intermediate and Advanced

PROGRAM
Introduction
Cynthia Harden, M.D.

New Outlook on Treatment for Status Epilepticus: Evidence-based Guidelines and Beyond
Thomas P. Bleck M.D., MCCM, FNCS

Seizure Clustering: What is it and How Do We Keep it from Escalating?
Lara Marcuse, M.D.

Subclinical Seizures and Periodic Patterns in the Critically Ill: Experts Debate on When to Treat and When to Not Treat
Lawrence Hirsch, M.D., and Suzette M. LaRoche, M.D.

Status Epilepticus “Outliers” : Early Recognition and Prompt Management
Jeffrey W. Britton, M.D.

Conclusions
Jerry Shih, M.D.

EDUCATION CREDIT
2.0 CME credits
This activity is eligible for ACPE and ANCC credit; see final CPE/CE activity announcement for specific details.

2:30 p.m. – 4:00 p.m.
Investigators Workshop

Whole Exome Sequencing in the Epilepsies: Making Sense of the Sequence Data
Moderators: Sam Berkovic, M.D., and Ingo Helbig, M.D.

Speakers: Sarah Weckhuysen, M.D., Slave Petrovski, Ph.D., and Roland Krause, Ph.D.
OVERVIEW
Management of women with epilepsy during child-bearing years requires complex decision-making, with the goal of optimal maternal seizure control balanced against potential fetal risks of in utero anti-epileptic drug exposure. An abundance of data is now available to differentiate risks between some AEDs with regard to both structural teratogenicity and neurodevelopmental consequences. However, evidence is still lacking regarding many of the AEDs overall, and details of how best to dose AEDs during critical time windows to optimize maternal and fetal outcomes is an area of active research. Peripartum is a particularly vulnerable time for seizure worsening; data is now available to support the benefits of breastfeeding in women with epilepsy on AEDs but sleep disruption can worsen seizures in many. This session will provide the latest data available regarding these issues, as well as delve into some of the more contemporary controversies including when use of valproate is justifiable in this special patient population, dosing strategies, and when therapeutic drug monitoring should be used and alternative strategies when it is not available.

LEARNING OBJECTIVES
Following participation in this session, learners should be able to:

- List the antiepileptic drugs (AED) that carry relatively higher teratogenic risk (structural and neurodevelopmental).
- Review and discuss how each AED does or does not increase the teratogenic risk.
- Describe gestational pharmacokinetic principles and restate how to adjust medications during pregnancy to maintain seizure control, as well as in the postpartum period.
- Delineate approaches for counseling women regarding strategies to lower seizure risk during the peripartum period.
- Recognize and describe the neurodevelopmental risks of children born to women with epilepsy, with specific considerations of contributory factors that include family history, vitamin use, AED type and dose, and maternal seizure control as well as other obstetric and neonatal complications.
- Identify the neurocognitive profiles to monitor during early child development.

TARGET AUDIENCE
Basic and Intermediate

PROGRAM
Introduction
Sheryl Haut, M.D.

Pre-pregnancy Planning: AED Choice and Pregnancy Outcomes
Kimford J. Meador, M.D.

The Valproate Controversy: The Worldwide Perspective
Torbjörn Tomson, M.D.

Management of Epilepsy During Pregnancy and Postpartum: AED Dosing Strategies
Page B. Pennell, M.D.

Postpartum Management: Risk of Seizures and Safety, Newborn Care and Nursing
Sanjeev Thomas, M.D.

Conclusions
Page B. Pennell, M.D.

EDUCATION CREDIT
2.0 CME credits

This activity is eligible for ACPE, ANCC, and AANP credit; see final CPE/CE activity announcement for specific details.

OVERVIEW
This symposium will present recent research and practice evidence regarding how assessing, evaluating and treating the psychosocial comorbidities of epilepsy is part of comprehensive lifespan care for persons with epilepsy and their families. As per the IOM Epilepsy Across the Spectrum (2012) recommendations, treating psychosocial comorbidities is a priority and supports improved health outcomes and quality of life. Attendees will be prepared to apply this information to meet the comprehensive care needs of patients with epilepsy and their families. In addition, possible interventions to accommodate lack of resources and funding regarding psychosocial comorbidities of epilepsy will also be addressed.
LEARNING OBJECTIVES
Following participation in this session, learners should be able to:

• Delineate and implement strategies to assess and treat psychosocial comorbidities care into practice, to include: networking with other health care providers regarding comprehensive patient care needs, including the primary care provider, other epilepsy specialists and community organizations.

• Recognize and actively participate in the assessment and treatment of psychosocial comorbidities as part of the comprehensive epilepsy team including providing education, resources and counseling to persons with epilepsy and their families.

• Recognize and engage in the interprofessional contribution of pharmacists as part of the comprehensive epilepsy team assessing the patient's medication therapy adherence and treatment needs.

• Recognize the interprofessional contribution of psychologists/neuropsychologists as part of the comprehensive epilepsy team in assessing the psychosocial comorbidities of epilepsy including referrals for and evidence-based therapeutic interventions for patients with epilepsy and their family members.

TARGET AUDIENCE
Basic, Intermediate and Advanced

PROGRAM
Introduction
Janelle Wagner, Ph.D.

Epilepsy Psychosocial Comorbidities Survey Results of an American Epilepsy Society Membership
Rochelle Caplan, M.D., and Mary Lou Smith, Ph.D.

Pediatric Epilepsy Side Effects Questionnaire and Clinically Meaningful Change
Diego Morita, M.D.

Cognitive and Behavioral Comorbidities of Epilepsy Throughout the Lifespan
Jana Jones, Ph.D.

Assessing Psychosocial Comorbidities in Adults with Epilepsy in the Epilepsy Monitoring Unit and Outpatient Clinic
Madona Plueger, MSN, CNRN, ACNS-BC

Conclusion and Faculty Panel
Gigi Smith, Ph.D., RN, CPNP-PC

EDUCATION CREDIT
2.5 CME credits
This activity is eligible for ACPE and ANCC credit; see final CPE/CE activity announcement for specific details.

7:00 p.m. - 10:00 p.m.
5th Annual AES Wine Tasting and Silent Auction
Additional fee and ticket required.

Join friends and colleagues for a fun, casual evening that also raises funds for the AES Lennox and Lombroso and Susan S. Spencer Funds. Sample exceptional wines from all over the world paired with choice cheeses and innovative hors d’oeuvres. Plus your participation helps fund early career fellowships and training in basic science and clinical research.

Massa’s South Coast Grill
1331 Lamar Street, Suite 114
Houston, TX 77010

New for 2016: Tickets are available during the registration process, $175 per person. Please register early — space is limited to 200 people.
These workshops highlight exciting developments in basic, translational and clinical epilepsy research and are designed to encourage interactive discussion about challenges and opportunities for future advances. Speakers include established and junior epilepsy investigators, as well as researchers from other fields with expertise that may be applied to epilepsy. In addition, one workshop will feature presentations by junior investigators in cutting-edge areas of research.

Most Investigators Workshops will run as concurrent sessions on Sunday, with one workshop on Saturday afternoon and two workshops on Monday afternoon. A poster session will accompany the workshops on Sunday, with posters selected from among highly-ranked Annual Meeting abstracts.

TARGET AUDIENCE
Neurologists, neuroscientists, pharmacologists, neuropsychologists, neurosurgeons and other scientists, professionals and trainees who are performing research in epilepsy.

PROGRAM
Investigators Workshop Committee Chair: Viji Santhakumar, Ph.D.

Clinical Investigators Workshop Committee Chair: Edward J. Novotny Jr., M.D.

Morning Session I: 8:45 a.m. - 10:15 a.m.

1. Epilepsy - A Tauopathy?
   Moderator: Matthias Koeppe, M.D., Ph.D.
   Speakers: Xin-You Tai, M.D., Jeffrey Noebels, M.D., Ph.D., and Christophe Bernard, Ph.D.

2. Role of Aberrant Neurogenesis in Epileptogenesis
   Moderator: Jenny Hsieh, Ph.D
   Speakers: Helen Scharfman, Ph.D., Kyung-Ok Cho, M.D., Ph.D., and Steve Danzer, Ph.D.

3. Seizure Termination: Multiple Mechanisms
   Moderators: Peter Carlén, M.D., and Marco de Curtis, M.D.
   Speakers: Marco de Curtis, M.D., Laura Uva, Ph.D., and Paolo Bazzigaluppi, Ph.D.

4. Electroencephalographic Language Mapping in Epilepsy Surgery: From Cortical Stimulation to Real-time Dynamic
   Moderator: Ravindra Arya, M.D., D.M.
   Speakers: Ravindra Arya, M.D., D.M., Nathan Crone, M.D., and Prasanna Jayakar, M.D., Ph.D.

5. Peripheral and Imaging Biomarkers in Epilepsy
   Moderators: Manisha Patel, Ph.D., and Stefanie Dedeurwaerdere, Ph.D.
   Speakers: Stefanie Dedeurwaerdere, Ph.D., Svenja Heischmann, Ph.D., and William Theodore, M.D.

6. Glial Mechanisms of Epilepsy
   Moderator: Long-Jun Wu, Ph.D.
   Speakers: Ukpong Eyo, Ph.D., Devin Binder, Ph.D., and Karen Wilcox, Ph.D.

Poster Session and Lunch: Noon - 1:30 p.m.

Afternoon Session I: 1:30 p.m. - 3:00 p.m.

7. Natural Fluctuations of Epilepsy: Lessons from a Million Seizures
   Moderator: William Theodore, M.D.
   Speakers: Daniel Goldenholz, M.D., Ph.D., Tobias Loddenkemper, M.D., and Victor Ferastraoru, M.D.

8. Novel Immunomodulatory Therapies in Epilepsy
   Moderators: Dan Xu, Ph.D., and Sooky Koh, M.D., Ph.D.
   Speakers: Dan Xu, Ph.D., Eleonora Aronica, M.D., Ph.D., and Teresa Ravizza, Ph.D.

9. Hot Topics from Young Investigators in the Epilepsy Community
   Moderators: Viji Santhakumar, Ph.D., and Sydney Cash, M.D., Ph.D.
   Speakers: To Be Announced

Afternoon Session II: 3:15 p.m. - 4:45 p.m.

10. Neurovascular Unit in Seizures and Epilepsy
    Moderators: Devin Binder, Ph.D., and Viji Santhakumar, Ph.D.
    Speakers: Nicola Marchi, Ph.D., Todd Fiacco, Ph.D., and G. Campbell Teskey, Ph.D.

11. Emerging Strategies Using Stem Cells to Prevent Epilepsy
    Moderator: Helen Scharfman, Ph.D.
    Speakers: Jenny Hsieh, Ph.D., Jack Parent, M.D., and Robert Hunt, Ph.D.

    Moderator: Jana Veliskova, M.D., Ph.D.
    Speakers: Melissa Benson, Ph.D., Jacqueline Crawley, Ph.D., and Pierre-Pascal Lenck-Santini, Ph.D.
OVERVIEW
This year’s Annual Course will focus on the evaluation and management of the “worst of the worst,” super-refractory patients with epilepsy. Four cases will be presented throughout the day which span the age spectrum from infancy to old age. In addition to case-based scenarios, lectures, debates and counterpoints, plus questions and answers will be employed regarding the recommended approaches to diagnosing and treating these challenging cases. The morning session will start with the case of an infant with epileptic encephalopathy, followed by lectures on neuroimaging beyond MRI, genetic etiologies for children and the value of palliative surgeries. A case of a teenager with seizures from autoimmune disease will then be used to discuss autoimmune etiologies, how to treat, dietary management for adolescents and adults and then a counterpoint on the transition of care from pediatric to adult providers. After the lunch break, there will be a case of an adult with progressive myoclonic epilepsy, followed by lectures on genetic conditions for adults, neuropsychiatric strategies to improve quality of life, new drugs in the pipeline and a debate regarding the true value of the newest anticonvulsant drugs. A case of an elderly patient who has failed surgeries, followed by lectures on the causes of surgical failure, use of herbs and botanicals and a closing debate on when in the course of treatment care should be more palliative.

LEARNING OBJECTIVES
Following participation in this session, learners should be able to:

• Delineate the appropriate role of genetic testing and advanced neuroimaging in diagnosing refractory epilepsy.
• Discuss the impact of severe epilepsy on the patient’s family.
• Recognize when immunotherapy and dietary management would be appropriate treatments for refractory epilepsy.
• Describe “best practices” for transitioning pediatric patients to adulthood.
• Select the appropriate anti-epileptic medication(s) and herbs for the treatment of refractory epilepsy.
• Delineate the causes of surgical failure.
• Compare and contrast the newest anti-epileptic drugs (AEDs) available and in the pipeline with standard AEDs in terms of efficacy, side effects and cost.
• Restate whether or not these newer AEDs are truly changing the percent of patients in the refractory category.
• Discuss strategies neuropsychologists can use to improve the quality of life for patients with refractory epilepsy.

TARGET AUDIENCE
Intermediate and Advanced

PROGRAM
8:45 a.m.  Introduction
Eric Kossoff, M.D.

8:55 a.m.  Case One: Infant with Epileptic Encephalopathy (Ohtahara) Due to Multiple Cortical Malformations
Jack Lin, M.D.

9:00 a.m.  Lecture: Diagnostic Neuroimaging Beyond MRI
Fernando Cendes, M.D., Ph.D.

9:25 a.m.  Lecture: Genetic Causes of Severe Refractory Epilepsy
Annapurna Poduri, M.D.

9:50 a.m.  Lecture: The Role of Palliative Surgery in 2016: Callostomy, MST
Howard Weiner, M.D.

10:05 a.m.  Lecture: Impact on the Family: What Topics Should Be Discussed and When (Prognosis, SUDEP, Siblings, etc)?
Katherine Junger, Ph.D.

10:20 a.m.  Break

10:35 a.m.  Case Two: Seventeen-Year-Old with Refractory Seizures from Autoimmune Encephalitis
Robert Bollo, M.D.

10:40 a.m.  Lecture: Algorithm for Evaluating Patients for Presumed Autoimmune Disease
Nicholas Gaspard, M.D., Ph.D.

11:00 a.m.  Lecture: Immunotherapy for the Refractory Patient
Eric Lancaster, M.D.

11:20 a.m.  Lecture: Diets for Older Adolescents and Adults with Highly Refractory Seizures
Mackenzie Cervenka, M.D.

11:40 a.m.  Counterpoint: Transition of the Adolescent with Severe Epilepsy to Adult Providers — How Best to Accomplish This
Sarah Kelley, M.D. (Pediatrics), and Elizabeth Felton, M.D., Ph.D. (Adult)

Noon-2:00 p.m.  Lunch

2:00 p.m.  Case Three: Adult with Progressive Myoclonic Epilepsy
David Ficker, M.D.
2:05 p.m.  **Lecture: Important Genetic Conditions to Consider in Adults**  
David Goldstein, Ph.D.

2:25 p.m.  **Lecture: Beyond Epilepsy — Neuropsychiatric Strategies to Improve Quality of Life**  
Jay Salpekar, M.D.

2:45 p.m.  **Lecture: Exciting New Drugs in the Pipeline**  
Steve White, Ph.D.

3:05 p.m.  **Debate: The Newer Drugs Are Changing the Landscape and Helping These Patients**  
Daniel Friedman, M.D.

*These New Drugs Have NOT Improved the Outcomes for Refractory Patients*  
Michael Rogawski, M.D., Ph.D.

3:25 p.m.  **Break**

3:40 p.m.  **Case Four: Elderly Adult Who Has Failed Multiple Surgeries: Johnny Returns**  
Michael Gelfand, M.D., Ph.D.

3:45 p.m.  **Lecture: What Are the Causes of Surgical Failures?**  
Elaine Wyllie, M.D.

4:05 p.m.  **Lecture: Herbs and Botanicals — Can They Help?**  
Dana Ekstein, M.D.

4:25 p.m.  **Debate: There Is Always Hope! Keep Trying! There Are Times to Be Helpful, but Times to Stop**  
Frank Gilliam, M.D., M.P.H.

4:55 p.m.  **Course Wrap-up**  
Eric Kossoff, M.D.

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**EDUCATION CREDIT**

6.0 CME Credits

This activity is eligible for ACPE and ANCC credit; see final CPE/CE activity announcement for specific details.

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**Childrens Hour | Challenges in Managing Epilepsy Associated with Malformations in Cortical Development in Children: Overview of Imaging Techniques**

*Coordinators:* Rima Nabbout, M.D., Ph.D., and Elaine Wirrell, M.D.

This SIG will focus on three – four challenging cases of children with intractable epilepsy due to MCD. Each presenter will present relevant history and physical findings, along with relevant imaging. An expert panel consisting of Pediatric Neurosurgery, Pediatric Neuroradiology and Pediatric Epileptology will discuss each case, focusing on imaging, neurophysiologic and/or surgical techniques that would assist with each case, along with input from the audience. Proposed cases are: 1) intractable epilepsy with overlapping or very near to eloquent cortex; 2) infantile spasms, with evidence of focal features clinically and/or on EEG but negative MRI; focus will be on investigation of young child less than two years old; 3) tuberous sclerosis; and 4) frontal lobe epilepsy with negative structural MRI with focus on investigation of older child with negative structural MRI.

**Psychosocial Comorbidities | Diagnostic and Management Challenges in Psychosocial Comorbidities: Complex Clinical Cases**

*Coordinators:* Gaston Baslet, M.D., and Jana E. Jones, Ph.D.

Identification and management of psychosocial comorbidities in epilepsy can be challenging due to several factors. These factors include, but are not limited to, understanding psychiatric symptoms in the context of seizure occurrence, potential impact of psychiatric treatment on seizure control, implications of comorbidities on seizure treatment outcome and on overall functioning. This year's panel of experts will discuss cases that highlight these challenges and how to navigate complex scenarios to achieve the best possible outcome. The discussion will involve adult and pediatric cases and comorbidities will include psychiatric/behavioral and cognitive presentations.
Quality, Value and Safety in Epilepsy | Quality Improvement Projects to Improve Epilepsy Care: Why, When and How

Coordinators: Katherine Noe, M.D., Ph.D., and Gabriel Martz, M.D.

The focus of this year’s SIG will be to provide a framework on how quality improvement projects are conceived, designed and executed. The target audience will be both the novice who may be considering undertaking a QIP in their epilepsy practice as well as the more experienced researcher. The session will start with a brief overview/primer of the QIP from Richard Zimmerman, M.D., epilepsy neurosurgeon and leader of quality management services at Mayo Clinic Arizona. This will be followed by two invited speakers who will discuss their own QIP from conception to publication. Ahsan Moosa Naduvil, M.D., pediatric epileptologist and quality improvement officer at the Cleveland Clinic will present his experience with improving the seizure interview process in the pediatric epilepsy monitoring unit via a guided team based approach. Jennifer Disabato, DNP, CPNP-PC, AC, from Children’s Hospital Colorado will discuss a QI project to address the transition from pediatric to adult care for adolescents and young adults with refractory epilepsy.

There will be time for audience members to ask questions and discuss their own QIPs.

Sleep and Epilepsy | Sleep Disorders and Their Relation to Epilepsy: Updates on Insomnia, Sleep Apnea and Movement Disorders

Coordinators: Milena Pavlova, M.D., and Erik St. Louis, M.D.

Within the last five years, there have been some major developments in understanding the relationship between sleep disorders and epilepsy. In addition to new evidence on how impaired sleep may exacerbate epilepsy, there have been several new methods of treatment for these disorders. For example, there have been several publications addressing the frequency of insomnia complaints among epilepsy patients, a new medication available for treatment of insomnia, more thorough understanding of the risk of worsening epilepsy among patients with untreated sleep apnea, new methods of treatment of obstructive sleep apnea and a better understanding of the relationships of nocturnal movement disorders and epilepsy. Based on these developments, the SIG will focus on the relationship of major sleep disorders and epilepsy. The SIG will start with a 10 minute introduction by the chair. Subsequently, there will be the following presentations: 1) Insomnia and Epilepsy – Sandra Horowitz, M.D.; 2) Obstructed Sleep Apnea and Epilepsy – Milena Pavlova, M.D.; and 3) Movement Disorders and Parasomnias – Erik St Louis, M.D.

Temporal Lobe Club | How Should High Frequency Oscillations Be Used to Delineate the Epileptogenic Region for Surgery?

Coordinators: Jerome Engel, Jr., M.D., Ph.D., and Jean Gotman, Ph.D.

Increasing evidence indicates that specific aspects of high frequency oscillations during long term invasive monitoring and intraoperative ECoG can be used to determine the boundaries of the epileptogenic region. Noninvasive approaches to recording high frequency oscillations are also being developed. What is now needed to apply these advances to standard approaches to resective surgery for epilepsy?
7:00 a.m. - 8:30 a.m
Special Interest Groups

NIH and Non-Profit Research Resources/Junior Investigator Workshop | Funding Opportunities and Peer Review Tips
Coordinators: Vicky Whitemore, Ph.D., Tracy Dixon-Salazar, Ph.D., Mackenzie C. Cervenka, M.D., and Catherine Chu, M.D.

This session will highlight funding opportunities for epilepsy research and provide an overview of the peer review process with a mock study section presentation. Funding opportunities for junior investigators will be emphasized, but basic and clinical researchers at all stages are encouraged to attend. Panelists will include representatives from organizations that support epilepsy research in the U.S. or worldwide and researchers who have served as reviewers for NIH and non-profit organizations. Tips will be shared for investigators submitting applications and for those serving as reviewers, and participants will also receive a handout listing funding opportunities for junior investigators along with eligibility criteria and important deadlines.

Practice Management
Coordinator: Gregory Barkley, M.D.

The 2016 Practice Management SIG will seek to answer questions on how to run epilepsy practices in 2017 by focusing upon pertinent changes in CMS payment policies which will be announced in the summer and fall. Many of these policies, such as the 2017 CMS Physician Fee Schedule, are slated to be released on November 1, 2016. Others, such as any changes to the 2017 ICD-10-CM codes, will go into effect on October 1, 2016. The proposed rule for inpatient hospital billing, IPPS, was released on April 18, 2016, and will be finalized on August 1, 2016, and go into effect on October 1, 2016. Proposed IPPS CMS changes continue the mandated move from payment for volume to payment for value and include new notification rules on observation patients, decreased payments to Disproportionate Share Hospitals (DSH) for uncompensated care and many changes to hospital Inpatient Quality Reporting Programs. If time permits, new payment models, such as the Specialty-Based Global Payment programs based upon the Oncology Care Model, will be discussed along with how such programs might affect care of patients with epilepsy and seizures.

Private Practice Epilepsy | How to Prepare for the Imminent Challenges and Changes In Clinical Work and Research in Private Epilepsy Practice
Coordinators: Marcelo Lancman, M.D., and Pavel Klein, M.D.

The session will cover the many challenges that epilepsy practitioners in private practice will be facing in 2017. It will also expand on the potential of current collaboration in research among private epilepsy practices and centers. Existing achievements that have resulted from collaborative efforts among private epilepsy centers will be presented and further expansion of these plans will be discussed.

SUDEP | Hot Topics in SUDEP Research
Coordinators: Lisa Bateman, M.D., Gordon Buchanan, M.D., Ph.D., and Daniel Friedman, M.D.

In the past five years, there has been a significant increase in the number of investigators pursuing research into the understanding of SUDEP. As a result, the rate of new discoveries has increased to the point where it may be difficult for many to keep up with the latest research. In this session, we will discuss the state of the art in clinical and basic science SUDEP-related research. The session will begin with an update on the activities of the NINDS sponsored Center for SUDEP Research, including its major research initiatives and early results. Discussion follows on the latest cutting-edge SUDEP-related research with presentations by junior investigators. Speakers and topics will be selected based on research presented at this AES meeting and at the recent Partners Against Mortality in Epilepsy (PAME) Conference. A panel of experts will provide commentary on the presentations and time will be allowed for discussion with audience members.

Tumor-related Epilepsy | Scientific Developments and Their Impact on the Treatment
Coordinators: Jeffrey Politsky, M.D., and Sandeep Mittal, M.D.

In 2016, we will discuss the hottest topics relating to the underlying mechanisms of how tumors cause epilepsy and the current investigational and newly approved treatments target certain pathologic markers. In addition, we will discuss the most recent advances in the diagnostic and therapeutic approach to patients with brain tumors and epilepsy, focusing specifically on the peri-operative stage.
Women with Epilepsy: Catamenial Epilepsy and Menopausal Transition: Blessing or Blight?

**Coordinators:** Mona Sazgar, M.D., and Danielle M. Andrade, M.D.

Women with catamenial epilepsy often wonder whether their seizure exacerbation with hormonal fluctuations will resolve with the arrival of menopause. In fact a question often posed to the treating epileptologist is whether pharmacologically or surgically induced menopause will help reduce their seizure severity and improve their quality of life. They consider drastic measures such as hysterectomy and oophorectomy in the hopes of trade off for better seizure control. There are also issues regarding treating the menopausal symptoms with hormonal replacement therapy, as well as osteoporosis and bone loss exacerbated by early menopause and seizure medications. The experts for this exciting SIG will use the latest evidence to tackle challenges faced by women with catamenial epilepsy such as early menopause, hormonal replacement therapy and bone health. They will discuss the complex and multidirectional interaction between sex hormones, seizures and antiepileptic drugs (AEDs) as related to the care of women with catamenial epilepsy facing menopause.

### 8:00 a.m. - 2:00 p.m.
**Poster Session Three**

### 8:00 a.m. - 5:00 p.m.
**Scientific Exhibits**

### 8:45 a.m. - noon
**Merritt-Putnam Symposium | Multiscale Imaging of Seizures and Epilepsy**

**OVERVIEW**

One of the grand goals of neuroscience is to understand how the interplay of structural, chemical and electrical signals in and between cells of brain tissue gives rise to function and disease. There is an emerging arsenal of tools and technologies for obtaining imaging data spanning multiple scales from molecules, cells, assemblies, networks and nervous systems that are poised to impact our understanding of epilepsy and advance therapeutic options for our patients. This session will present the latest evidence in neuroscience of which clinicians need to be aware in order to provide optimal patient care. Strategies for counseling patients and their families regarding the effect of surgery on memory circuits will be discussed.

**LEARNING OBJECTIVES**

*Following participation in this session, learners should be able to:*

- Describe the advances in structural and functional imaging and delineate their role in predicting epilepsy surgery outcomes and memory impact.
- Review and discuss the emerging evidence for cellular imaging in focal epilepsy.
- Counsel patients and families regarding the impact of surgery on memory circuits and the association with prognosis.

**TARGET AUDIENCE**

Basic, Intermediate and Advanced

**PROGRAM**

**Introduction**

Gregory Worrell, M.D., Ph.D.

**Imaging Cells and Assemblies**

Peyman Golshani, M.D.

**Technologies for Imaging the Neural Circuits Underlying Seizure**

Jin Hyung-Lee, Ph.D.

**Functional Imaging and Neurotransmitters in Epilepsy**

Kate Davis, M.D.

**Functional MRI and EEG in Epilepsy**

Jean Gotman, Ph.D.

**Functional Imaging of Memory Systems and Epilepsy**

Jeffrey Binder M.D.

**Conclusions**

Gregory Worrell, M.D., Ph.D.

**EDUCATION CREDIT**

3.0 CME credits

This activity is eligible for ACPE and AANP credit; see final CPE/CE activity announcement for specific details.

### 9:00 a.m. - 10:30 a.m
**Special Interest Groups**

**Cognitive and Behavioral Treatments | Effective Psychobehavioral Treatments in Adults and Children with Epilepsy: Closing the Practice and Research Gaps**

**Coordinators:** Janelle Wagner, Ph.D., and W. Curt LaFrance, M.D., M.P.H.

Given the comorbidities associated with epilepsy and the substantial impact epilepsy and its treatments have on health-related quality of life (HRQOL), psychological and behavioral health interventions aimed at enhancing psychological well-being and self-management are essential for persons with epilepsy (PWE). Psychological/behavioral health interventions include a broad range of interventions that use psychological or behavioral techniques designed to improve HRQOL, seizure...
frequency and severity and psychiatric/psychological comorbidities. A recent Cochrane review was conducted by the ILAE Psychobehavioral Treatment Task Force to assess the effects of such psychological treatments on HRQOL in PWE. ILAE Committee members will present this systematic review of 23 randomized, controlled trials, with a particular focus on intervention components (similarities and differences), strengths and weaknesses of selected outcomes and how these methodological variations make it challenging to compare findings across studies. Speakers will also present therapeutic recommendations and implications for future research design based on the findings of the Cochrane review. Both adult and pediatric interventions will be covered. The SIG format will involve brief presentations with significant time for discussion of and questions regarding findings and future directions.

**MEG/MSI | Epileptic and Resting-state Network: Does Network Analysis Provide a New Perspective on Epilepsy?**

*Coordinators: Michael Funke, M.D., Ph.D., and Gretchen Von Allmen, M.D.*

Emerging evidence indicates that brain function and dysfunction actually results from a complex interplay or “network” of different brain areas, and that these networks have considerable plasticity, especially in children. Recently MEG has demonstrated utility in identifying abnormal functional connectivity patterns in the resting-state networks of patients with epilepsy compared to unaffected controls. However, much remains unknown about epileptic networks and their interplay with these resting state networks. Deciphering the epileptic networks themselves using MEG may provide new insights into the pathophysiology of epilepsy, and how these networks may influence treatment and prognosis. This program aims to showcase the most recent advances in this quickly evolving field and stimulate vivid discussion among international experts.

**Pediatric Epilepsy Case Discussions | Pediatric Epilepsy Case Discussions**

*Coordinators: Elaine Wyllie, M.D., and Ahsan Moosa Naduvil Velapill, M.D.*

For over twenty years, this session has provided a rare platform for discussion of complex challenges in management of pediatric epilepsy. Each of five distinguished faculty present an enlightening case for discussion from their clinical practice, illustrating important new advances in diagnosis and treatment. The session’s case-based format allows exploration of a wide range of topics at each session, as can be seen from some recent examples, including NMDA receptor encephalitis, stereotactic EEG in children, near-SUDEP, GLUT-1 deficiency and absence epilepsy syndrome, and epilepsy surgery for ES secondary to early brain lesions. By offering this annual opportunity to share illustrative clinical experiences, AES fosters impactful interaction and communication among pediatric epilepsy specialists worldwide.
**LEARNING OBJECTIVES**
Following participation in this session, learners should be able to:
• More rapidly diagnose epilepsy in TSC by utilizing clinical, electrophysiological, imaging and molecular biomarkers.
• Describe the preventive treatment of epilepsy in TSC.
• Develop optimal treatment strategies in TSC for epilepsy and behavioral problems.
• Discuss the burden of epilepsy in TSC: drug-resistant epilepsy, intellectual disability and behavioral problems.
• Describe the relationship between medical data and intellectual disability and behavioral problems.
• Delineate new treatment options for behavioral problems in TSC.

**TARGET AUDIENCE**
Intermediate and Advanced
EEG | Quantitative EEG Trends in the Epilepsy Monitoring Unit and Intensive Care Unit

**Coordinators:** Susan T. Herman, M.D., and Kitti Kaiboribo, M.D.

Long-term continuous EEG (CEEG) monitoring is a valuable method for diagnosis of epilepsy and for detection of seizures in patients with altered mental status. CEEG is a labor-intensive process, requiring 1–2 hours for review and interpretation of 24 hours of CEEG. Quantitative EEG trends, or graphical displays of EEG characteristics, can aid in identification of abnormal segments of EEG, making review more efficient and facilitating real-time communication of EEG abnormalities. In this session, speakers will review commonly employed quantitative EEG techniques and discuss their use in the detection of seizures, ischemia and other abnormalities in the epilepsy monitoring unit and intensive care unit. Presentations will highlight practical aspects of using quantitative EEG trends, including pros and cons of various trends and pitfalls in use of trends.

Neuropharmacology | Antiepileptic Drug Selection in Special Population

**Coordinators:** Mitra Habibi, Pharm.D., and Archana Shrestha, M.D.

This SIG focuses on individuals with a common interest in neuropharmacology and epilepsy. Epilepsy can affect various different patient populations, including the elderly, people with other chronic disorders and those with limited income. Anticonvulsant medications are the mainstay of treatment for people with epilepsy and there are many medication options including generics available. However, the use of antiepileptic drugs in these special populations of patients can pose significant problems. For instance elderly patients are usually on multiple drugs and their age related pharmacokinetic changes put them at higher risk for important drug-drug interactions and adverse events. Also, access to these medications due to their cost can be an issue for patients. The special populations being treated and their needs and risks must be considered when selecting anticonvulsant medications. The SIG this year will focus on anticonvulsant medication selection in specific populations of patients with epilepsy.

Neuropsychology | Cognition and Epilepsy Across the Lifespan

**Coordinator:** Gail L. Risse, Ph.D.

The effects of chronic seizure activity on cognitive function remain controversial. This SIG will explore the evidence for cognitive impairment in pediatric new onset epilepsy, cognitive decline in adults with intractable seizures and the possible relationship between persistent seizures in older adults and premature aging.

Psychogenic Nonepileptic Seizures | Global Perspectives on Psychogenic Nonepileptic Seizures (PNES): Research and Clinical Experiences across Countries and Cultures

**Coordinator:** Sigita Pliaplys, M.D.

This SIG will provide a forum for the global PNES experts from Japan, China, India, Israel, Iran, South Africa, Canada, Puerto Rico, Chile and Brazil to share their findings. The dissemination of the multicultural PNES research and clinical experience at the AES, along with engagement in constructive discussion amongst the U.S. and international experts, will improve the knowledge and encourage development of global strategies for PNES diagnosis and treatment. Specific topics for presentations include: demographic and clinical characteristics of PNES patients in Asia, the Middle East, Africa, North America and South America; cultural differences in provider and patient perceptions, acceptance and awareness of PNES; barriers in providing effective care and different approaches to diagnostic evaluation and treatment in the context of limited access to the vEEG; and lack of access to research data that is specific to certain countries and/or cultures. A multidisciplinary hospital-based model of services for pediatric PNES, developed at the Hospital for Sick Children in Toronto, Canada, will also be presented. The limitations in PNES educational programs and clinical training will be highlighted to reflect that it is a global problem.

Tuberous Sclerosis | Novel and Investigational Therapeutic Approaches to Epilepsy in Tuberous Sclerosis

**Coordinator:** Michael Wong, M.D., Ph.D.

Epilepsy occurs commonly in tuberous sclerosis complex (TSC) and is often resistant to available treatments. Progress in understanding the pathophysiology of epilepsy in TSC provides potential opportunities for novel therapeutic approaches in TSC. Furthermore, TSC is often viewed as a model disease, in which pathophysiological and therapeutic advances may be relevant to other types of genetic and acquired epilepsies. For example, mTOR inhibitors are currently
being investigated as treatments for drug-resistant epilepsy in TSC and also have potential preventative, antiepileptogenic effects, but are starting to be considered in other types of genetic cortical malformation involving mTORopathies, such as focal cortical dysplasia. While cannabinoids (CBD) have been a hot area of epilepsy research primarily focused on Dravet and Lennox-Gastaut syndromes, clinical trials of CBD in TSC patients are now under way. In terms of novel surgical approaches, laser ablation has become a cutting-edge surgical option for epilepsy and may be particularly amenable to the multifocal tubers of TSC. In this SIG, we will review these and other novel therapeutic approaches to epilepsy in TSC. Michael Wong, M.D., Ph.D., from Washington University will present the latest basic science findings and clinical trial updates related to both antiseizure and antiepileptogenic indications for mTOR inhibitors. Elizabeth Thiele, M.D., Ph.D., of Massachusetts General Hospital will discuss the potential use of CBD in TSC. Rohini Coorg, M.D., of Baylor College of Medicine will present her institution’s experience with laser ablation for drug-resistant epilepsy in TSC. Ample time will be reserved for discussion of other potential novel therapies in various stages of research, such as preventative approaches with vigabatrin or ketogenic diet and targeting other aspects of the mTOR pathway.

LEARNING OBJECTIVES
Following participation in this session, learners should be able to:
• Discuss the anti-seizure mechanisms of brain stimulation for medically refractory epilepsy.
• Provide an overview of empirical observations of various sites of anti-seizure stimulation.
• Describe how anti-seizure stimulation can both disrupt and drive local neuronal circuits.
• Delineate the network effects of anti-seizure stimulation.
• List chronic the neuronal changes that may drive long term benefits of brain stimulation for epilepsy.

TARGET AUDIENCE
Intermediate and Advanced

PROGRAM
Introduction and Overview of Brain Stimulation in Models and Patients: Targets and Empirical Effects
Kevin Graber, M.D.

Mechanisms of Seizure Control with Local Circuit Stimulation
Dominique Duran, Ph.D.

Modulation of Epileptic Networks with Electrical Stimulation
Kristl Vonck, Ph.D.

Positive Cascades: Improving Efficacy and Outcomes
Esther Krock-Magnuson, Ph.D.

Conclusions
Kevin Graber, M.D.

EDUCATION CREDIT
2.0 CME credits
This activity is eligible for ACPE and ANCC credit; see final CPE/CE activity announcement for specific details.
Basic EEG in Epilepsy: Fundamentals and Interpretation
11:00 a.m. - 12:30 p.m.
12:45 p.m. - 2:15 p.m.

Moderator: Gregory D. Cascino, M.D.

The routine EEG recording remains essential in the care and management of individuals with seizures and suspected epilepsy. The EEG is used for diagnosis, classification of seizure type and identification of a specific epileptic syndrome. EEG findings may be of prognostic importance and be used to assess the efficacy of treatment. Use of appropriate EEG methodology and recognition of artifact and benign variant patterns are essential for satisfactory clinical studies. This workshop will review basic methodologies of EEG for the evaluation and treatment of pediatric and adult patients with seizure disorders. This will include use of appropriate EEG techniques and fundamentals of EEG recordings. Recognition of benign variant alterations and ictal-interictal epileptogenic discharges will be addressed. The presentations will also discuss the importance of EEG to identify characteristics of specific epilepsies and epileptic syndromes.

Basics of Neuroimaging Acquisition and Processing: What the Clinician Needs to Know
11:00 a.m. - 12:30 p.m.

Please note this Workshop occurs only once.

Moderators: R. Edward Hogan, M.D., Andrea Bernasconi, M.D., and Matthias Koepp, M.D.

Basic principles of image acquisition and post-image-acquisition-processing have important implications for correlation with clinical history and EEG findings in the diagnosis and treatment of epilepsy. The workshop will focus on pertinent basic principles of acquisition and processing of MRI, PET, and SPECT. The program will review the basic steps of structural the MR image acquisition and processing using a simple algorithm ("processing pipeline" figures), and discussion of common pitfalls (movement, inhomogeneity, causes for miss-segmentation, manual corrections). For PET, we will concentrate primarily on imaging glucose metabolism with FDG emphasizing best practice of data acquisition and analysis, but also cursory mention the current state-of-play of clinical use of novel PET ligands. Discussion of SPECT will include important issues of administration of radiopharmaceutical in the epilepsy monitoring unit, as well as basics of image acquisition, co-registration and normalization for subtraction SPECT studies.

Genetic Testing in Epilepsy Patients
11:00 a.m. - 12:30 p.m.
12:45 p.m. - 2:15 p.m.

Moderators: Alica M. Goldman, M.D., Ph.D., and Annapurna Poduri, M.D.

Novel detection platforms have accelerated scientific discoveries of genes relevant to patients with epilepsy of all ages. These research findings are being used in institutions and commercial laboratories. Selection of patients that would most benefit from the genetic investigations, identification of the appropriate tests and reporting of results are increasingly complex. This skills workshop will review available testing platforms and outline case scenarios driven testing algorithms. The aim is to provide a practical clinical guide in selecting patients, testing methods, and the workflow involved in ordering, submitting and reporting genetic tests.

The workshop is designed to be an interactive, case-driven discussion and a practical guide for clinical care. Participants are encouraged to submit questions and cases to Drs. Goldman and Poduri. The goal is to address pressing questions and discuss real life cases within the context of genetic testing driven diagnostics and care.

Intracranial Electrode Studies: How Do You Choose a Technique for Optimum Localization
11:00 a.m. - 12:30 p.m.
12:45 p.m. - 2:15 p.m.

Moderator: Dennis Spencer, M.D.

Over the past thirty 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. Imaging and stereotactic navigation have made great strides and epilepsy centers have many choices regarding types of electrodes, number of contacts needed and how they are delivered.

This is an interactive workshop where two – three cases are presented illustrating different problems to be solved in defining a region of epileptogenesis. The participants work in groups to provide a consensus intracranial study. A guest experienced epileptologist will provide his or her institution's approach to the case and we will then describe what was done and the outcome. There will be an attempt to discuss as many alternative approaches as possible, balancing the invasiveness of the various procedures and risk versus benefit.
Neurostimulation/VNS
11:00 a.m. - 12:30 p.m.
12:45 p.m. - 2:15 p.m.
Moderator: Mohamad Koubeissi, M.D.

Neurostimulation is now an accepted treatment option for patients with refractory epilepsy. Two devices are approved by the FDA for patients with epilepsy: the vagus nerve stimulation (VNS) and the responsive neurostimulator (RNS). This workshop will discuss and instruct on how to use these devices effectively. After the workshop, participants should be able to identify appropriate patients, understand how implantation is carried out and how to program the devices. Side effects and how to practically manage them will be discussed as well.

Optimal Use of Neuroimaging in Diagnosing and Treating Epilepsy
11:00 a.m. - 12:30 p.m.
12:45 p.m. - 2:15 p.m.
Moderators: John Stern, M.D., and David Millett, M.D., Ph.D.

Neuroimaging is an essential tool in the diagnosis and treatment of epilepsy. It has opened a window on the pathological substrate underlying epilepsy, ranging from subtle gliotic lesions and cortical malformations to larger, more extensive structural disturbances. This workshop will review the techniques used to diagnose epilepsy, emphasizing both basic MRI customized for epilepsy and advanced neuroimaging techniques. We will review a rational approach to the use of neuroimaging, highlight specific techniques that enhance diagnostic ability, along with newer fMRI and other functional imaging methods. Interpretation of scans and various findings will be reviewed in this practical session.

Treating Patients with Psychogenic Nonepileptic Seizures
12:45 p.m. - 2:15 p.m.
Please note this Workshop occurs only once.
Moderator: W. Curt LaFrance, Jr., M.D., M.P.H.

Psychogenic nonepileptic seizures (PNES) are prevalent and disabling and are often identified in seizure monitoring units. Neurologists readily diagnose PNES, but the majority of providers do not feel equipped to treat patients with PNES. Psychogenic NES present in adults and children with neurologic signs, psychological stressors and comorbid psychiatric disorders. For years, neurologists, psychiatrists and psychologists have accumulated data about NES phenomenology, epidemiology, risks, comorbidities and prognosis. The role of the neurologist and mental health providers in the diagnosis and management of these patients will be discussed, and common obstacles that preclude proper treatment will be reviewed. ILAE Task Force recommendations and randomized clinical trial data will be presented, including pharmacologic and non-pharmacologic interventions. Participants will observe treatment of patients with PNES using a validated intervention shown to reduce seizures, improve comorbidities and quality of life. Session participants will view video vignettes from in-session interactions between clinicians (including epileptologists and mental health workers) providing PNES treatment. During this workshop participants will learn the elements of the 12-session intervention, using the seizure treatment workbook.

Preclinical Common Data Elements: Update on the AES/ILAE/NINDS Initiative
11:00 a.m. - 5:00 p.m.

Co-chairs: Helen Scharfman, Ph.D., Jacqueline French, M.D., and Asla Pitkanen, M.D., Ph.D.

In human epilepsy clinical trials, the use of common forms for obtaining key data points (common data element forms) has contributed greatly to the acquisition of high quality data that can be compared across sites. The AES/ILAE translational task force of the ILAE with the partnership of NINDS have developed common data element forms for key aspects of pre-clinical translational research that include behavior, physiology, pharmacology and EEG studies. This open forum will be the first opportunity for the communities who will be the end-users of these forms to evaluate them and provide comments. The feedback received will be critically important for the development of broadly community-accepted usable forms.