

Poster Session

GENETICS/EPIGENETICS

Board # Poster Presentation

- 1** *Functional Genomic Characterization of Gene Regulatory Elements Associated With Epilepsy*
Birnbaum RY, Zhang Y, Wei C-L, Ahituv N
University of California, San Francisco and DOE Joint Genome Institute
- 2** *Epigenetic Regulation of Gene Expression and Cognitive Function in Epilepsy*
Chin J, Corbett B, Zhang X, Hazra A, Iascone D, Ashok A, Zhou L
Thomas Jefferson University
- 3** *In Vivo Analysis of a Candidate Modifier Gene of an Epilepsy Modifier Loci on Mouse Chromosome 11*
Hawkins NA, Kearney JA
Vanderbilt University School of Medicine
- 4** *Epigenetic Regulation of the SCN1A Gene for the Treatment of Dravet Syndrome*
Khorkova O, Yuan T, Coito C, Lin YC, Chang FC, Lawrence M, Hsiao J
OPKO CURNA, National Taiwan University and RxGen
- 5** *Methylation Mechanisms in Epilepsy and Associated Memory Deficits*
Parrish R
University of Alabama, Birmingham

Notes:

*Travel Award provided by the International League Against Epilepsy (ILAE).

All other poster presenters received Travel Awards from NINDS, NIH.

Bold indicates poster presenter.

BASIC RESEARCH ON THE EPILEPSIES

Board # Poster Presentation

- 6** *Astrocytes Are Required for the Progressive Development of Epilepsy*
Clasadonte J, Dong J, Hines DJ, Haydon PG
Tufts University School of Medicine
- 7** *Probing Seizure Initiation With Light: Spatiotemporal Influence of Optogenetic Stimulation of the Cortical Focus in Rats with Absence Epilepsy*
Wagner F, Wang J, Truccolo W, Nurmikko A
Brown University, Providence Department of Veterans Affairs, and Massachusetts General Hospital
- 8** *On-Demand Optogenetic of Spontaneous Seizures in a Mouse Model of Temporal Lobe Epilepsy*
Krook-Magnuson E, Armstrong C, Oijala M, Soltesz I
University of California, Irvine
- 9** *Opposing Seizure-Induced Brain Injury by Targeting Inflammatory Prostaglandin Signaling*
Jiang J, Quan Y, Yang M, Ganesh T, Lelutiu N, Pouliot WA, Dudek FE, Dingledine R
Emory University School of Medicine and University of Utah School of Medicine
- 10** *Interaction Between BDNF/TrkB Signaling in Inhibitory Interneurons and Epilepsy*
Martinowich K, Jimenez DV, Schloesser RJ
Johns Hopkins School of Medicine and University of Maryland School of Medicine
- 11** *Human Inhibitory Single Neurons Switch Off Before Dramatic Increases in Seizure Intensity*
Ahmed OJ, Truccolo W, Donoghue JA, Eskandar EN, Cosgrove GR, Potter NS, Blum AS, Hochberg LR, Cash SS
Harvard Medical School, Massachusetts General Hospital, Rhode Island Hospital and Brown University
- 12** *Visual Cortical Excitatory Neurons Cell-Autonomously Regulate their Inhibitory Inputs in an Activity-Dependent Manner*
Xue M, Scanziani M
University of California, San Diego
- 13** *Suppression of Adult Neurogenesis Enhances Response to the Convulsant Kainic Acid in Mice*
Iyengar S, LaFrancois J, Drew L, Burghardt N, Denny C, Wu M, Friedman D, MacLusky N, Hen R, Scharfman H
The Nathan Kline Institute for Psychiatric Research, Columbia University, The New York State Psychiatric Institute, New York University Langone Medical Center and University of Guelph

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TRAUMATIC BRAIN INJURY

Board # Poster Presentation

- 14** *A "Cryptic Injury" Animal Model of Acquired Temporal Lobe Epilepsy with Classical Hippocampal Sclerosis*
***Norwood BA**
University Marburg
- 15** *IGF-1 Contribution to Epileptogenesis Through Activation of Akt-mTOR Signaling is Revealed by Rapid-Throughput Screen in Organotypic Hippocampal Culture Model of Post-Traumatic Epilepsy*
Berdichevsky Y, Dryer A, Mahoney M, Pimentel C, Mullan H, Saponjian Y, Usenovic M, Staley KJ
Lehigh University, Massachusetts General Hospital and Harvard Medical School
- 16** *Traumatic Brain Injury Alters Cortical Glutamate Network Function by Compromising GABAergic Control*
Cantu D, Walker K, Andresen L, Taylor-Weiner A, Ziburkus J, Tesco G, Dulla C
Tufts University School of Medicine
- 17** *Erythropoietin Attenuates Loss of KCC2 and IPSCs in a Clinically Relevant Model of Preterm Brain Injury: Insights Into Epileptogenesis*
Jantzie LL, Firl DJ, Robinson S
Boston Children's Hospital and Harvard Medical School
- 18** *Prophylactic Effect of In Vivo Optogenetic Stimulation on Post-Traumatic Epileptogenesis in Mice*
Ping X, Gao J, **Jin X**
Indiana University School of Medicine

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AGING/NEURAL DEGENERATION

Board # Poster Presentation

- 19** *The Influence of APOE Genotype on Neuronal Resilience in Epilepsy: Implications for Early Intervention*

Aboud O, Mrak R, Boop F, Griffin S

University of Arkansas for Medical Sciences, University of Toledo Health Sciences Campus, University of Tennessee Health Sciences Center, and Center Arkansas Healthcare Veterans System

- 20** *Abnormal Capillary Vasodynamics Contribute to Neural Degeneration in Epilepsy*

Macknik SL, Leal-Campanario R, Alarcon-Martinez L, Demirci T, Arribas JI, Schlegel AA, Martinez-Conde S, Rho JM, Calhoun ME, Rieiro H, Otero-Milla J

Barrow Neurological Institute, Universidad Pablo de Olavide, Universidad Valladolid, Sing Systems, Alberta Children's Hospital and Universidade de Vigo

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PEDIATRIC EPILEPSIES

Board # Poster Presentation

- 21** *Time to Pediatric Epilepsy Surgery is Related to Disease Severity, Diagnostic and Sociodemographic Factors*
Baca CB, Vickrey BG, Vassar S, Hauptman JS, Dadour A, Oh T, Salamon N, Vinters HV, Sankar R, Mathern GW
Mattel Children's Hospital, University of California, Los Angeles and VA Greater Los Angeles Health Care System
- 22** *Impaired Homeostatic Synaptic Scaling in Neurons Following Neonatal Seizures*
Sun H, Kosaras B, Jensen FE
Children's Hospital Boston and Harvard Medical School and University of Pennsylvania
- 23** *The Impact of Aberrant Neuronal Activity on the Formation of Hyperexcitable Neocortical Networks: Implications for Infantile Spasms*
Ballester-Rosado CJ, Le J, Lam T, Swann JW
Texas Children's Hospital and Baylor College of Medicine
- 24** *APC cKO Mouse as a New Model of Infantile Spasms*
Dulla C, Yee A, **Jacob M**
Tufts University School of Medicine
- 25** *Aberrant Neurogenesis in Infantile Spasms and Ohtahara Syndrome: Implications for Cognitive Development*
Jansen LA, William H. Roden WH, Siebert JR, Ojemann JG
University of Virginia, University of Washington and Seattle Children's Hospital
- 26** *Age and Sex Dependent Severity of Ischemic Neonatal Seizures: Response to Phenobarbital + Bumetinide in a Mouse Model*
Kadam SD, Markowitz GJ, Kang SK, Kim ST, Johnston MV
Hugo W. Moser Research Institute at Kennedy Krieger and Johns Hopkins University School of Medicine

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CO-MORBIDITY AND SUDEP

Board # Poster Presentation

- 27** *Serotonergic Agents Prevent Respiratory Arrest and Death Following Electrically-induced Seizures*
Buchanan GF, Richerson GB
Yale University, Veteran's Affairs Medical Center, University of Iowa and Veteran's Affairs Medical Center
- 28** *Sudden Unexpected Death in a Mouse Model of Dravet Syndrome*
Kalume F, Westenbroek RE, Cheah CS, Yu FH, Oakley JC, Scheuer T, Catterall WA
University of Washington, Seattle Children's Hospital Research Institute
- 29** *GABAergic Regulation of the HPA Axis and Its Role in the Comorbidity of Depression and Epilepsy*
Maguire J
Tufts University School of Medicine
- 30** *Combined In Vivo Whole-Cell Recordings, Calcium Imaging, and Optogenetics in Epileptic Mice Performing a Virtual Reality Based Working Memory Task*
Golshani P
University of California, Los Angeles
- 31** *Dysregulation of mTOR Results in Autism-like Deficits and Learning Deficits*
Lugo J, Arbuckle E, Smith G
Baylor University

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SEIZURE LOCALIZATION AND SURGERY

Board # Poster Presentation

- 32** *Dynamic Imaging of Seizure Activity Using Noninvasive High-Resolution EEG*
Lu Y, Yang L, Worrell GA, He B
University of Minnesota and Mayo Clinic
- 33** *Hemodynamic Low-Frequency Oscillations May Locate Epileptic Brain Lesions*
Song Y, Leichner J, Bhatia S, Ragheb J, Jayakar P, Riera JJ, Lin W-C
Florida International University and Miami Children's Hospital
- 34** *Modeling Electrocortical Source Dynamics of Intracranial EEG Data in Epilepsy*
Akalin Acar Z, Mullen T, Groppe D, Mehta A, Worrell G, Makeig S
University of California San Diego and Mayo Clinic
- 35** *Separable Millimeter-Scale Epileptiform Spike Propagation Patterns and Their Relationship to Seizures*
Vanleer A, Wagenaar JB, Blanco J, Vigeland L, Viventi J, Contreras D, Litt B
University of Pennsylvania
- 36** *High Resolution Brain Machine Interfaces Using Flexible Silicon Electronics: Research and Clinical Applications*
Viventi J
New York University
- 37** *Localized Quantitative Analysis of Positron Emission Tomography for Temporal Lobe Epilepsy Lateralization and Surgical Intervention*
Bagher-Ebadian H, Hamidian H, Jafari-Khouzani K, Schwab J, Spanaki-Varelas M, Wasade V, Soltanian-Zadeh H
Henry Ford Hospital
- 38** *In Vivo Imaging of Epilepsy Using Hyperpolarized NMR: Translation from Animals to Man*
Bhattacharya P, Chan H, Ross B
The University of Texas M.D. Anderson Cancer Center
- 39** *Identification of Eloquent Cortical Areas Using Resting State fMRI: A Validation With In Vivo Direct Cortical Electrical Stimulation in Humans*
Groppe DM, Bickel S, Keller CJ, Kingsley P, Mehta AD
Feinstein Institute for Medical Research
- 40** *Improved Outcomes With Earlier Surgery for Intractable Frontal Lobe Epilepsy*
Jehi L, Simasathien T, Vadera S, Najm I, Bingaman W
Cleveland Clinic

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THERAPEUTIC DEVELOPMENT

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- 41** *Blood-Brain Barrier Function in Epilepsy: New Targets for Therapy?*
Bauer B, Soldner ELB, Schlichtiger J, Pekcec A, Hartz AMS
University of Minnesota Duluth
- 42** *Synaptic Excitation-Inhibition Imbalance in Neuroglycopenia and Treatment of Its Associated Human Epilepsy With Triheptanoin*
Pascual JM, Good L, Liu P, Marin-Valencia I, Ma Q, Tondo M, Park J, Kelly D, Hernandez A, Stavinoha P, Malloy C, Lu H
University of Texas Southwestern
- 43** *A Novel Mitochondria-Targeted Antiseizure Treatment*
Simeone K
Creighton University
- 44** *Drug-Metabolizing Enzymes in Human Epileptic Brain: Functional and Cellular Implications for Better Therapy to Drug Resistance*
Ghosh C, Marchi N, Janigro D
Cleveland Clinic Lerner Research Institute
- 45** *Effectiveness of Phenytoin-Caffeine Combination in General Seizures*
***Widyati C**, Maria D, Soediatmoko, Ikawati Z, Hakin L, Wibowo S
Navy Hospital, University of Surabaya, University of Gajah Mada and Dr. Sarjito Hospital
- 46** *Development of JAK-STAT Inhibitors for Disease Modification in Epilepsy*
Carrel AJ, Grabenstatter H, Carlsen J, Cruz Del Angel Y, Russek SJ, Wempe M, Brooks-Kayal AR
University of Colorado Schools of Medicine and Pharmacy and Boston University School of Medicine
- 47** *Parent Survey of Current Use of Cannabidiol (CBD) in Pediatric Epilepsy*
Jacobson C
Stanford University
- 48** *A Novel Oligonucleotide that Directs Alternative Splicing of the AMPA Receptor GluA1 Subunit to Reduce Seizures and Postseizure Hyperexcitability*
Lykens NM, Coughlin DJ, Reddi JM, Lutz GJ, Tallent MK
LifeSplice Pharma, LLC, Widener University, Drexel University College of Medicine

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THERAPEUTIC DEVELOPMENT (*CONTINUED*)

Board # Poster Presentation

- 49** *Development of T-Type Calcium Channel Ligands for Epilepsy*
McDaniel S, Petrov RR, Gadotti VM, You H, Bladen C, Berger ND, Zamponi GW,
Diaz P
University of Montana and University of Calgary
- 50** *Intra-Amygdalar Transplantation of Epileptic Patient-Derived Stem Cells, Displaying a MicroRNA Profile of Reduced mir-34b/c and Increased mir-592, Attenuates Hippocampal Cell Loss in Epileptic Rats: MicroRNA Profiling as a Biomarker and Stem Cell Screening Tool for Transplantation Therapy in Epilepsy*
Tajiri N, Ishikawa H, Shinozuka K, Dailey T, Kaneko Y, Malapira T, Gemma C, Vale F,
Borlongan CV
University of South Florida Morsani College of Medicine

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