

# Jong M. Rho, MD

*Division of Pediatric Neurology  
Rady Children's Hospital San Diego  
Departments of Neurosciences, Pediatrics and Pharmacology  
University of California San Diego  
Altman Clinical and Translational Research Institute (ACTRI), L3E210  
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## **CURRICULUM VITAE**

**BIRTH INFORMATION:** October 20, 1955; Seoul, S. Korea

**PERSONAL** Married (Jennifer Hope Goetsch) with children (Jaron Elizabeth Reed, 7-15-88; Jeremy Alexander Rho, 1-18-99; Janine Hope Rho, 2-8-02)

**CITIZENSHIP/RESIDENCY:** United States of America (Citizen); Canada (Permanent Resident)

### **EDUCATION:**

#### Post-Graduate

10/1992 – 10/1994 Clinical Associate, Neuronal Excitability Section  
Epilepsy Research Branch  
National Institute of Neurological Disorders and Stroke  
National Institutes of Health, Bethesda, MD

7/1990 – 6/1992 Fellow in Pediatric Neurology, Department of Pediatrics  
UCLA School of Medicine, Los Angeles, CA

7/1989 – 6/1990 Resident, Department of Neurology  
UCLA School of Medicine, Los Angeles, CA

7/1987 – 6/1989 Pediatric Intern & Resident, Children's Hospital of Los Angeles  
USC School of Medicine, Los Angeles, CA

#### Medical

9/1983 – 6/1987 University of Cincinnati College of Medicine, Cincinnati, OH  
M.D. awarded June 1987

Undergraduate

9/1973 – 5/1977      Yale University, New Haven, CT  
B.A. in Molecular Biophysics & Biochemistry

**ACADEMIC POSITIONS**

10/1994 – 9/2000      Assistant Professor of Neurology & Pediatrics  
University of Washington School of Medicine, Seattle, WA

10/2000 – 7/2003      Assistant Professor of Pediatrics  
University of California at Irvine, College of Medicine, Irvine, CA

10/2002 – 7/2003      Assistant Professor of Neurology  
University of California at Irvine, College of Medicine, Irvine, CA

7/2003 – 7/2004      Associate Professor of Pediatrics & Neurology (w/tenure)  
University of California at Irvine, College of Medicine, Irvine, CA

8/2004 – 8/2010      Senior Staff Scientist, Barrow Neurological Institute  
St. Joseph's Hospital & Medical Center, Phoenix, AZ

7/2005 – 8/2010      Associate Professor of Clinical Neurology  
University of Arizona College of Medicine, Phoenix, AZ

7/2007 – 8/2010      Adjunct Professor, Neuroscience & Behavior Program  
Arizona State University, Tempe, AZ

7/2007 – 8/2010      Adjunct Professor, Harrington Department of Bioengineering,  
Fulton School of Engineering  
Arizona State University, Tempe, AZ

9/2010 – 7/2019      Professor of Paediatrics and Clinical Neurosciences  
Dr. Robert Haslam Chair in Child Neurology  
Cumming School of Medicine  
University of Calgary, Calgary, Alberta, Canada

7/2015 – 7/2019      Professor, Physiology and Pharmacology  
Cumming School of Medicine  
University of Calgary, Calgary, Alberta, Canada

9/2019 – Present      Professor of Neurosciences and Pediatrics  
University of California San Diego School of Medicine  
San Diego, CA

11/2021 – Present     Adjunct Professor of Pharmacology  
University of California San Diego School of Medicine  
San Diego, CA

***OTHER PROFESSIONAL POSITIONS***

7/1989 – 9/1992     Courtesy Staff and Consultant, Department of Pediatrics  
Huntington Memorial Hospital, Pasadena, CA

7/1990 – 6/1992     Consulting Pediatric Neurologist  
Kern County Medical Center, Bakersfield, CA

7/1991 – 6/1992     Consulting Pediatric Neurologist, Venice Family Free Clinic  
(Affiliated with UCLA), Venice, CA

7/1995 – 9/2000     Associate Medical Staff  
University of Washington Medical Center, Seattle, WA

10/1994 – 9/2000     Staff Attending Neurologist  
Children's Hospital & Regional Medical Center, Seattle, WA

10/2000 – 7/2004     Staff Attending Physician  
University of California at Irvine Medical Center, Orange, CA

2008 – 2009     Courtesy Staff, Department of Pediatrics  
Banner Desert Medical Center, Tempe, AZ

8/2004 – 8/2010     Staff Attending Neurologist, Children's Health Center  
Barrow Neurological Institute  
St. Joseph's Hospital & Medical Center, Phoenix, AZ

9/2010 – 7/2019     Consulting Neurologist, Lethbridge Hospital and Medicine Hat Hospital  
Alberta Health Services – Calgary Zone, Alberta, Canada

9/2010 – 7/2019     Staff Attending Neurologist, Alberta Children's Hospital  
Consulting Neurologist (Foothills Medical Centre, South Health Campus,  
Peter Lougheed Centre, and Rockyview General Hospital)  
Alberta Health Services - Calgary Zone, Alberta, Canada

9/2019 – Present     Staff Attending Neurologist, Rady Children's Hospital San Diego  
San Diego, CA

## **OTHER EXPERIENCE**

- 10/1992 – 10/1994 Medical Officer, United States Public Health Service (Rank O-4: Lieutenant Commander); Reserve Officer, 10/1994-10/1996
- 9/1981 – 8/1983 Research Assistant, Dept. Psychiatry & Behavioral Sciences  
Stanford University School of Medicine, Stanford, CA
- 7/1979 – 6/1981 Research Assistant, Eaton-Peabody Laboratory of Auditory Physiology,  
Massachusetts Eye and Ear Infirmary & Dept. of Anatomy, Harvard  
Medical School, Boston, MA
- 9/1977 – 6/1979 Full-time Faculty Member, Lawrence Academy, Groton, MA  
Secondary school mathematics (Algebra I/II/III & science/chemistry)  
instructor; athletic coach (cross-country, wrestling, baseball).

## **MEDICAL LICENSES AND CERTIFICATIONS**

California State License No. G 064857 (Issued 12/27/88; Re-issued 8/14/19; ACTIVE)  
College of Physicians and Surgeons of Alberta, Canada, No. 017440 (Issued 11/1/10; expired  
December 31, 2019)  
Arizona State License No. 33076 (Issued 7/16/04; Expired 10/20/2011)  
Maryland State License No. D 44958 (Issued 8/6/93; Expired 9/30/1995)  
Washington State License No. MD 32217 (Issued 9/15/94; Expired 10/20/2000)  
Drug Enforcement Act (DEA) Registration No. BR 1806833 (Expired 4/30/2013); Registration  
No. FR8764791 (Expiration 4/30/2024).  
Certified by the American Board of Neurology & Psychiatry: *Neurology with Special  
Qualification in Child Neurology*. Certificate Number 968 (1995); recertified 2006, 2016  
Board Eligible in Pediatrics

## **HONORS**

- 1976 John Spangler Nicholas Prize, Trumbull College, Yale University, New Haven, CT
- 1984 Alumni Award, University of Cincinnati College of Medicine, Cincinnati, OH
- 1989 Frances Nunnally Winzer Resident Award, Children's Hospital of Los Angeles, Los  
Angeles, CA
- 1991, 1992 Mead-Johnson Awards for Teaching Excellence, Housestaff Training Program,  
Department of Pediatrics, UCLA Medical Center, Los Angeles, CA

- 1992 Augustus S. Rose Teaching Award, Department of Neurology, UCLA Medical Center, Los Angeles, CA
- 1998, 1999 Best Teaching Awards, Neurology Residency Training Program, University of Washington & Children's Hospital & Regional Medical Center, Seattle, WA
- 2001 - 2002 Selected by Best Doctors, Inc. ([www.bestdoctors.com](http://www.bestdoctors.com)), Aiken, South Carolina (featured in Orange Coast Magazine, January 2002 and 2003)
- 2002 Primary Care Recognition Award for Specialist, UC Irvine Medical Center, Orange, CA
- 2004 National Register's Who's Who ([www.nationalswhoswho.com](http://www.nationalswhoswho.com)); Strathmore's Who's Who
- 2005 - 2010 Selected by Best Doctors, Inc. ([www.bestdoctors.com](http://www.bestdoctors.com)), Aiken, South Carolina
- 2009 Physician Recognition Award with Special Distinction, St. Joseph's Hospital & Medical Center, Phoenix, AZ
- 2009 America's Top Physicians, Consumers' Research Council of America, Washington, DC ([www.consumersresearchcncl.org](http://www.consumersresearchcncl.org))
- 2010 Career Lifetime Recognition Award, The Charlie Foundation, Santa Monica, CA
- 2010 Teacher of the Year Award, Department of Neurology, Barrow Neurological Institute, St. Joseph's Hospital & Medical Center, Phoenix, AZ
- 2010 Child Neurology Foundation, Inaugural Awardee, Infantile Spasms Hero Award
- 2013 Department of Paediatrics Academic Leadership Award, University of Calgary
- 2014, 2018 Faculty Award for Residency Teaching, Section of Pediatric Neurology, Alberta Children's Hospital
- 2014-2019 Marquis Who's Who in the World. (2018) Albert Nelson Marquis Lifetime Achievement Award
- 2014 Best Doctors Canada, Inc., 2014 ([www.bestdoctorscanada.com](http://www.bestdoctorscanada.com))
- 2016 Elected Inaugural Fellow of the American Epilepsy Society

- 2017 Distinguished Scholar Award, Le Bonheur Children’s Hospital Neuroscience Institute
- 2017 Elected and Inducted into the Canadian Academy of Health Sciences
- 2018 Creighton University School of Medicine Distinguished Lecturer, Omaha, Nebraska (April 25, 2018)
- 2018 The John Freeman Award, Scientific and Organizing Committees, 6<sup>th</sup> Global Symposium on Ketogenic Therapies for Neurological Disorders, Jeju, South Korea
- 2020 Nominated to the Sigma Xi Scientific Honor Society
- 2022 San Diego County Medical Society, Physicians of Exceptional Excellence – 2022 Top Doctors Award, San Diego Magazine

***MEMBERSHIP IN PROFESSIONAL SOCIETIES/ORGANIZATIONS***

*National/International*

- American Epilepsy Society
- Child Neurology Society
- Society for Neuroscience
- Canadian Neurological Sciences Federation (2011-2019)
- Canadian Association of Child Neurologists (2011-2019)
- Canadian Medical Association (2011-2019)

*Local/Regional*

- Research Affiliate, Center on Human Development & Disability (CHDD)  
University of Washington, Seattle, WA (1995 – 2000)
- Affiliate Faculty, Center for Ecogenetics and Environmental Health, National Institute of Environmental Health Sciences, Seattle, WA (1996 – 2000)
- Affiliate Faculty, Epilepsy Research Center (EpiCenter), University of California at Irvine, Irvine, CA (2001 – 2004)
- Primary Affiliate Faculty, Alberta Children's Hospital Research Institute for Child and Maternal Health, University of Calgary, Alberta, Canada (2010 – 2019)
- Associate Faculty, Hotchkiss Brain Institute, University of Calgary Faculty of Medicine (2011 – 2019)
- Alberta Medical Association (2014 – 2019).
- Calgary and Area Medical Staff Society, CAMSS (2010 – 2019).

## ***SERVICE TO PROFESSIONAL ORGANIZATIONS***

Member, Scientific Advisory Board, The Charlie Foundation (supporting research and education concerning the ketogenic diet), Santa Monica, California, 2001–Present.

Co-Director for Translational and Clinical Research, Pediatric Epilepsy Research Center (PERC), University of Washington School of Medicine, Seattle, Washington, 1999–2000.

Member, Basic Science Investigators Workshop Committee, American Epilepsy Society, 2004–2008.

Member, CME Content Review Committee, American Epilepsy Society, 2004–2008

Member, Pediatric Content Committee, American Epilepsy Society, 2004–2008, 2017-2019

Member, Review Committee, The Milken Family Foundation/American Epilepsy Society, Early Career Physician-Scientist Awards, 2006-2008.

Member, AET (Anti-epileptic Therapeutics) Symposium Planning Committee, American Epilepsy Society, 2009 – 2011.

Chairperson (2010-2011) and Vice-Chair (2009-2010), Scientific Program Committee, American Epilepsy Society.

Member, Scientific Program Committee, American Epilepsy Society, 1996–1998, 2004–2006.

Member, Commission on Medical Therapies, International League Against Epilepsy; 2017 – 2025; Co-Chair, Task Force on Dietary Therapies, 2017 – 2021, 2022 – 2026.

Co-Chair, Canadian Pediatric Epilepsy Network (CPEN), 2018 – 2021; Member, Steering Committee, CPEN, 2014 – 2019.

Chair, Global Ketogenic Therapies Executive Committee, The Charlie Foundation (USA) and Matthew's Friends Charity, UK, 2017 – Present.

Inaugural Lead and Chair, International Neurological Ketogenic Society ([www.neuroketo.org](http://www.neuroketo.org) and [www.globalketo.com](http://www.globalketo.com)), 2021 – Present.

Scientific Advisory Board Member, Citizens United for Research in Epilepsy (CURE) Foundation, Chicago, Illinois, 2012 – 2015. Reviewer for Innovator Grants and Travel Awards, 2015-2017; Taking Flight Research Awards, 2017-2019; CURE Epilepsy Awards, 2018-2019.

Special Scientific Advisory Board and Research Panel, Infantile Spasms Research Initiative, Citizens United for Research in Epilepsy (Chicago, IL), February 2012 – Present. Special Advisor to Post-Traumatic Epilepsy Initiative funded by the U.S. Department of Defense, 2017.

Child Neurology Society, Research Committee, Co-Chair of Task Force on Funding, 2019-2022.

Ad hoc reviewer for Scientific Review Branch, NINDS, 2009 (R13 grant mechanism).

Ad hoc member, Brain Disorders and Clinical Neurosciences I Study Section (BDCN-1), NINDS, National Institutes of Health, 1998.

Ad hoc member, Neurological Sciences and Disorders C Study Section (NSD-C), NINDS, National Institutes of Health, 2004, 2008-2010.

Ad hoc member, Developmental Brain Disorders Study Section (DBD), NINDS, National Institutes of Health, 2009.

Ad hoc reviewer, NUT (Nutrition) Committee, Institute for Nutrition, Metabolism and Diabetes, Canadian Institutes of Health Research, 2010.

Ad hoc reviewer, EUREKA RO1 grant panel, NINDS, National Institutes of Health, November 2010 and December 2011.

Ad hoc reviewer, United Kingdom Medical Research Council, UK Research and Innovation, Research Grant Review for special program entitled "Therapeutic Target Validation in Mental Health (TTV-MH)," Neurosciences & Mental Health Board, Mental Health and Addiction, 2018-2019.

Ad hoc reviewer, National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), National Institutes of Health. New Paradigms in Tissue Communication – from Mediators to Metabolic Function (RC2 High Impact Research and Research Infrastructure Programs, PAR-18-886), 2019-2020.

Ad hoc Committee Member, National Institutes of Health, NINDS, NST-1 Review Panel (K Awards, Clinician-Scientist Training Grants), 2018 - 2021.

Standing Committee Member, National Institutes of Health, NINDS, NST-1 Review Panel (K Awards, Clinician-Scientist Training Grants), 2021 - 2025.

Panel member, NUT (Nutrition) Committee, Institute for Nutrition, Metabolism and Diabetes, Canadian Institutes of Health Research, 2012.

Standing committee member, Neurological Sciences and Disorders C Study Section (NSD-C), NINDS, National Institutes of Health, 2004-2008.

National Institutes of Health (NIH) Grants Workshop Panel, University of Calgary, 2012.



National Institutes of Health, NINDS, NSD-K Special Emphasis Panel, ZNS1 SRB-G(71) Exploratory Clinical Trials (RO1), 2013, 2014.

National Institutes of Health, NINDS, MFSR, Special Emphasis Panel, ZRG1 BBBP-T(57)R, Preclinical Research on Model Organisms to Predict Treatment Outcomes for Disorders Associated with Intellectual and Developmental Disabilities (RO1), 2016 and 2017.

Canadian Institutes of Health Research (ad hoc panel member); Nutrition, Food and Health Peer Review Committee and Molecular & Cellular Neurosciences B Peer Review Committee, Fall 2013 Open Operating Grant Competition.

Canadian Institutes of Health Research (ad hoc panel member); Cluster Review Panel, Spring 2017 Project Scheme Grant Competition.

Canadian Institutes of Health Research, Member, College of Reviewers, July 2017 – July 2020.

Natural Sciences and Engineering Research Council of Canada (NSERC), ad hoc grant reviewer, 2014.

Contributing Editor and Reviewer, Basic Science Section, Epilepsy Currents, Blackwell Publishing, 2007 – 2014.

Editorial Board Member, Epilepsia, 2008 – 2011

Editorial Board Member, Journal of Pediatric Epilepsy, 2010 – 2017

Editorial Board Member, Public Library of Science, 2014 – 2018

Editorial Board Member, Epilepsia Open, 2016 – 2018

Associate Editor, Epilepsia Open, 2019 – Present

Associate Editor, Seizure – European Journal of Epilepsy, 2018 – 2020

Member, Board of Directors, Epilepsy Foundation of Arizona, 2008 – 2009

Member, Professional Advisory Board, Epilepsy Foundation of San Diego County, 2021 - Present

Committee Member, Brain Tumor Related Epilepsy Research Consortium, North America, 2015 – 2018.

Medical Board, Matthew's Friends Canada (on ketogenic therapies for epilepsy and other neurological disorders), 2015 – 2019.

Chair, Special Session (Ketogenic Diet in Epilepsy: How to Harness its Mechanisms for Drug Discovery?), UCB Epilepsy Summit (Connecting Patient Need and Innovative Science to Provide New Solutions for Epilepsy Treatment), Braine-l'Alleud, Belgium, September-October 2015.

Abstract Reviewer, American Academy of Neurology 2004, 2005, 2006 Annual Meetings.

Abstract Reviewer, American Epilepsy Society Annual Meeting (2005, 2006, 2010, 2011).

Co-chair of the following platform sessions at the Annual Meetings of the American Epilepsy Society: December 1997, Boston, MA: "Basic Research"; December 1998, San Diego, CA: "Experimental Models."

Chair, "Hot Topics in Epilepsy" Satellite Symposium, American Epilepsy Society Meeting, December 2005, Washington, DC.

Chair, "Clinical Roundtable" Special Interest Group, American Epilepsy Society Meeting, December 2006, San Diego, CA.

Chair, "Neuropharmacology" Special Interest Group, American Epilepsy Society Meeting, December 2008, Seattle, WA.

Co-Chair, "Ketogenic Diet" Special Interest Group, American Epilepsy Society Meetings, 2010-2012.

Moderator, "Breakfast Seminar" on "Future of Epilepsy Therapeutics", Child Neurology Society Meeting, November 2008, Santa Clara, CA.

Member and Maintenance of Certification Training Questions Author, Child Neurology Society Self-Assessment Examination Committee 2009.

Moderator, "Ketogenic Diet in Asian Countries", 10th Asian & Oceanian Congress of Child Neurology/32nd Congress of the Korean Child Neurology Society, Daegu, South Korea, June 2009.

Moderator, "Ketogenic Diet Basic Science" Plenary Session, 2<sup>nd</sup> International Symposium on Dietary Therapies for Epilepsy and Other Neurological Disorders, Edinburgh, Scotland, October 2010.

Session Chair and Organizer, "Basic and Clinical Pharmacology of Newer Anti-Seizure Drugs," 40<sup>th</sup> Annual Scientific Meeting, Canadian League Against Epilepsy, Vancouver, British Columbia, Canada, October 2017.

Moderator, "Ketogenic Diet and the Microbiome" Plenary Session, 6<sup>th</sup> Global Symposium on Ketogenic Therapies, Jeju Island, South Korea, October 2018.

Session Co-Chair and Organizer, “Metabolism-based Treatments for Epilepsy: The Ketogenic Diet and Beyond”, Pediatric State-of-the-Art Symposium, American Epilepsy Society Annual Meeting, New Orleans, Louisiana, USA, December 2018.

Moderator, Neonatal Neurosciences Theme, and Abstract Reviewer, Canadian National Perinatal Research Meeting, Banff, Alberta, February 2018.

Session Co-Chair and Organizer, “Metabolism- and Diet-Based Treatments for Epilepsy: Current Evidence and Controversies”, First North American Epilepsy Congress, Toronto, Canada, September 2020.

Session Chair, “Metabolism-Based Therapies for Epilepsy”, National Institutes of Health, NINDS Workshop, November 9-10, 2020.

Session Organizer and Chair, “Ketogenic Diets”, Inaugural Virtual Scientific Meeting, GLUT1 Deficiency Foundation, June 21-22, 2021.

Session Co-Chair, “The Ketogenic Diet: Highlights for the Centennial Following Its Birth”, Interactive Virtual Session, 34<sup>th</sup> International Epilepsy Congress, International League Against Epilepsy, September 1, 2021.

#### **REVIEWER FOR SCIENTIFIC JOURNALS AND ORGANIZATIONS**

- 1) Acta Histochemica, 2019
- 2) Advances in Nutrition, 2017
- 3) Ageing Research Reviews, 2010
- 4) Agence Nationale de la Recherche (ANR), France, 2012
- 5) Alberta Children’s Hospital Research Institute for Child and Maternal Health, University of Calgary, Research Day Judge and Large Grants Competition Reviewer, 2012; Summer Studentship Reviews, 2016; Annual Symposium Poster Judge, 2016
- 6) American Journal of Physiology – Regulatory, Integrative and Comparative Physiology, 2018
- 7) Annals of Neurology, 2003, 2012, 2013
- 8) Annals of the New York Academy of Sciences, 2013
- 9) Annals of Clinical and Translational Neurology, 2018
- 10) Behavioral Pharmacology, 2006
- 11) Biochemical Journal, 2017, 2018
- 12) BMC Neurology, 2018
- 13) Brain, 2021
- 14) Brain Communications, 2021, 2022
- 15) Brain Research, 2000, 2004, 2006-2009
- 16) Brain, Behavior and Immunity, 2016, 2018
- 17) British Journal of Pharmacology, 2017
- 18) Cerebrum, The Dana Foundation, New York, New York, 2012

- 19) Citizens United for Research in Epilepsy (CURE) Foundation, Chicago, IL (grant reviews), 2008, 2010, 2011, 2013, 2016, 2017
- 20) Contrast Media and Molecular Imaging, 2017
- 21) Current Neuropharmacology, 2009
- 22) EBioMedicine, 2019, 2022
- 23) E-Life, 2021
- 24) Epilepsia, 2001-2022
- 25) Epilepsia Open, 2018
- 26) Epilepsy & Behavior, 2008, 2009 through 2013
- 27) Epilepsy Ireland, Funding Scheme Competition, Spring 2016
- 28) Epilepsy Research, 1997, 1999, 2005, 2007 through 2013, 2018, 2019
- 29) Epileptic Disorders, 2019
- 30) European Journal of Clinical Investigation, 2015
- 31) European Journal of Clinical Nutrition, 2021
- 32) Experimental Neurology, 2007, 2008, 2011, 2015, 2017-2018
- 33) Expert Opinion on Drug Delivery, 2018
- 34) Expert Opinion on Pharmacotherapy, 2018
- 35) Expert Review of Neurotherapeutics, 2015, 2016
- 36) Frontiers in Molecular Neuroscience, 2017, 2021
- 37) Frontiers in Pharmacology, 2012, 2013, 2021
- 38) Frontiers in Psychiatry, 2017
- 39) Frontiers in Psychology, 2014
- 40) Glia, 2001, 2003
- 41) Grant Reviewer, Motor Neurone Disease Association, United Kingdom, 2016
- 42) Grant Reviewer, ZonMw Programma Translationeel Onderzoek 2, Netherlands, 2019
- 43) Grant Reviewer, Swiss National Science Foundation, 2022
- 44) Hormones and Behavior, 2012
- 45) International Journal of Biochemistry and Cell Biology, 2013
- 46) Journal of Child Neurology, 2014
- 47) Journal of Clinical Investigation, 2011
- 48) Journal of Neurochemistry, 2008, 2011, 2017
- 49) Journal of Neurophysiology, 2002, 2011, 2016
- 50) Journal of Neurotrauma, 2008
- 51) Journal of Nutrition and Metabolism, 2017, 2018
- 52) Journal of Pediatrics, 2006
- 53) Journal of the Neurological Sciences, 2016
- 54) Journal of Visual Experiments (JoVE), 2017
- 55) Lancet Neurology, 2017
- 56) Mental Retardation and Developmental Disabilities Research Reviews, 2000
- 57) Molecular Genetics and Metabolism, 2018
- 58) Molecular Neurobiology, 2018
- 59) National Science Center, Poland, Grant Reviews, 2016.
- 60) Nature Reviews Neuroscience, 2017
- 61) Nature Scientific Reports, 2016, 2017, 2018, 2020, 2021

- 62) Nature, 2017
- 63) Neurobiology of Disease, 2012, 2013, 2014, 2015, 2017, 2018, 2019
- 64) Neurochemical Research, 2010, 2017
- 65) Neurochemistry International, 2020
- 66) Neurogenetics, 2015
- 67) Neurology, 1997, 2015
- 68) Neuropharmacology, 2003, 2018, 2019, 2021
- 69) Neuroscience Letters, 2005, 2007-2011
- 70) Neurotherapeutics, 2008, 2012, 2013, 2018
- 71) New England Journal of Medicine, 2013
- 72) New York Academy of Sciences, Special Publications, 2008
- 73) Nova Scotia Health Research Foundation, Establishment Grant Reviewer, 2011
- 74) Nutrients, 2018, 2020
- 75) Nutrition and Metabolism, 2015
- 76) Pediatric Epilepsy Research Foundation (Dallas, TX) grant reviewer, 2013, 2014
- 77) Pediatric Research, 2003, 2010, 2011
- 78) Pharmacological Research, 2013
- 79) Pharmacology and Therapeutics, 2021
- 80) Physicians Services Incorporated (PSI) Foundation, Ontario, Canada, Grant Reviews, 2014
- 81) Physicians' Services Incorporated Foundation, Toronto, Ontario (grant reviews), 2003
- 82) Physiological Research, 2017
- 83) Physiology and Behavior, 2017, 2018
- 84) PLoS Biology, 2008
- 85) Progress in Neurobiology, 2009
- 86) Rejuvenation Research, 2008
- 87) Review Commons, 2021
- 88) Science Translational Medicine, 2014, 2017, 2018, 2019
- 89) Seizure: European Journal of Epilepsy, 2020, 2021
- 90) Sick Kids Foundation, Toronto, Ontario (grant reviews), 2006
- 91) Swiss National Science Foundation (ad hoc grant review), 2022
- 92) The Israel Science Foundation, 2017
- 93) The Journal of Neuroscience, 2003, 2004, 2007, 2010, 2013, 2015, 2016, 2017, 2018, 2022
- 94) The Thrasher Foundation (grant reviews), 2008
- 95) Theranostics, 2020
- 96) Translational Psychiatry, 2017
- 97) Trends in the Neurosciences, 2008, 2013

**LOCAL ADMINISTRATIVE SERVICE**

Rady Children's Hospital and University of California San Diego

2019 – Present      Division Chief, Pediatric Neurology

2019 – Present	Member, Board of Directors, Children’s Specialists of San Diego (CSSD)
2019 – Present	Member, Steering Committee, Brain Initiative (Institutes of Distinction: Brain Biology & Behavior, Neuroscience).
2019 – Present	Chair and Member, Faculty Search Committees, Division of Pediatric Neurology
2019 – Present	Member, Child Neurology Program Education Committee (PEC)
2019 – Present	Member, Child Neurology Resident Clinical Competency Committee (ACGME)
2019 – Present	Member, Rady Children’s Hospital Steering Group, United Healthcare Diagnostic Odyssey Initiative
2020 – Present	Lead Member, Rady Children’s Hospital Steering Group, Inflammatory Brain Disorders Initiative
2020 – Present	Member, Search Committee for Division Chief of Child Psychiatry
2020 – Present	Member, Rady Children’s Hospital Clinical and Operations Subcommittee on Annual Capital Budgets
2020 – Present	Intramural Grants Review Panel, Rady Children’s Institute for Genomic Medicine
2020 – Present	Member, Department of Neurosciences Ad Hoc Subcommittee on Appointments and Promotions (NEUCAP)
2020 – Present	Member, Department of Neurosciences Research Growth and Strategy Committee
2021 – Present	Faculty Mentor, UCSD National Center of Leadership in Academic Medicine Program
2022 – Present	Inaugural Director, Rady Children’s Neuroscience Institute
2019 – 2022	Operational and Strategic Lead, Development of Rady Children’s Neuroscience Institute

*Alberta Children's Hospital and University of Calgary (Alberta, Canada)*

2010 – 2019	Section Chief, Paediatric Neurology, Department of Paediatrics, Alberta Health Services - Calgary Zone
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2010 – 2019	Zone Paediatric Executive Committee, Department of Paediatrics
2010 – 2019	Academic Executive Committee, Department of Clinical Neurosciences
2010 – 2019	Paediatric Neurology Residency Training Committee (PNRTC)
2011 – 2014	Theme Group Co-Leader, Behavior and the Developing Brain, Alberta Children’s Hospital Research Institute (ACHRI)
2011 – 2019	Pediatric Brain Injury Research (Concussion and Traumatic Brain Injury), Pain and Rehabilitation, Neurodevelopmental Disorders, Neurocritical Care, Epilepsy, and Sleep Working Groups, Alberta Children’s Hospital Foundation, Alberta Children’s Hospital
2014 – 2016	Theme Group Leader (Sole), Behavior and the Developing Brain, Alberta Children’s Hospital Research Institute (ACHRI)
2010 – 2019	Search and Selection Committees for Numerous Junior and Senior Level Faculty Recruitments (Faculty of Medicine – Pediatrics, Clinical Neurosciences, Medical Genetics, Cell Biology and Anatomy, Psychiatry [Cuthbertson-Fischer Chair in Mental Health], Director of Owerko Centre on Neurodevelopment and Child Mental Health; Faculty of Kinesiology; Faculty of Arts – Psychology Department Head); Search and Selection Committee, Department Head, Pediatrics
2013	Chair, Internal Review Committee, Department of Paediatrics Headship, Faculty of Medicine
2011 – 2012	Undergraduate honors thesis committee (Neuroscience Program)
2010 – 2011	Ambulatory Care Evolution Project, Alberta Children’s Hospital, Faculty Liaison
2012 – 2019	Member, Internal Peer Review Committee, Canadian Tri-Council Grant Applications, Alberta Children’s Hospital Research Institute and Department of Pediatrics
2013 – 2014	Alberta Children’s Hospital Research Institute, Small Grants Competition Review Panels
2014	Co-chair, Integrated Brain Health Working Group, Strategic Framework for Implementation of New Wing of Hospital, Alberta Health Services
2014	University of Calgary, Alberta Children’s Hospital Research Institute, Child Development Center Renovation, Construction Steering Committee

2014 – 2015 Vi Riddell Pain and Rehabilitation Center Implementation Team and Academic Steering Committee, Alberta Children’s Hospital

2014 – 2019 Co-Lead for the Integrated Neurodevelopmental Disorders Initiative, University of Calgary

2014 – 2016 Oversight, Owerko Center for Neurodevelopment and Child/Youth Mental Health, Child Development Center, Alberta Children’s Hospital Research Institute, University of Calgary

2015 – 2019 Executive Committee (at large member), Hotchkiss Brain Institute, Brain and Mental Health Initiative, University of Calgary

2015 Internal Grant Review Committee, Brain Canada Technology and Platform Initiative, University of Calgary

2015 – 2019 Member, University of Calgary Brain and Mental Health Fundraising Priorities Committee

2016 Alberta Children’s Hospital Research Institute, Research Training Platform Review Committee

2016 – 2019 Executive Committee, Owerko Center for Neurodevelopment and Child/Youth Mental Health

2016 – 2019 Theme Leadership Committee, Behavior and the Developing Brain, Alberta Children’s Hospital Research Institute

2017 – 2019 Member, Management Committee, Experimental Imaging Center, Cumming School of Medicine, University of Calgary

2017 – 2019 Member, Internal Peer Review Committee, Canadian Tri-Council Grant Applications, Hotchkiss Brain Institute and Department of Clinical Neurosciences

2018 – 2019 Member, Advisory Committee, Emerging Cross-Cutting Research Initiatives in Precision Child Health, University of Calgary President’s Office

*Barrow Neurological Institute and St. Joseph's Hospital & Medical Center (Phoenix, AZ)*

2004 – 2010 Associate Director, Child Neurology

2004 – 2010 Director, Pediatric Epilepsy Research



2004 – 2005	Member, Neurology Faculty Policies and Procedure Task Force
2005 – 2009	Member, Institutional Review Board (Committee B)
2006 – 2008	Barrow Neurological Foundation/Women's Board Grant Review Committee
2007 – 2008	St. Joseph's Hospital/Barrow Senior Research Council Faculty Promotions Committee
2008	St. Joseph's Hospital/Barrow/Creighton University School of Medicine Clinical Campus Research Subcommittee
2008	Member, Health Research Alliance Arizona Committee, University of Arizona College of Medicine
2008 – 2009	St. Joseph's Hospital/Barrow Research Strategic Planning Committee

University of California Irvine College of Medicine (Irvine, CA)

2000 – 2004	Search Committees for Faculty, Departments of Pediatrics, Neurology, and Neurosurgery
2001 – 2004	Faculty Advisor, Residency Program, Department of Pediatrics
2001 – 2003	Interviewer, Pediatric Residency Program, Department of Pediatrics
2002 – 2003	Director, UCI Comprehensive Epilepsy Program (Combined Adult Epilepsy and Pediatric Epilepsy Programs)
2000 – 2002	Director, UCI Pediatric Epilepsy Program
2001	Organizer, Vagus Nerve Stimulation Program and Clinics
2001	Member, UCI Medical Center Product Line Business Planning and Resource Allocation Workgroup (PriceWaterhouseCoopers)
2002	General Clinical Research Center (GCRC) Imaging Research Review Committee

University of Washington School of Medicine (Seattle, WA)

1995 – 1999	Interviewer, Pediatric Residency Program, Department of Pediatrics
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- 1996 – 1997 Pediatric Neurology Grand Rounds Organizing Committee
- 1997 – 1999 Search Committees for Division Chief and Junior Faculty, Department of Neurology

*Children's Hospital & Regional Medical Center (Seattle, WA)*

- 1995 – 1996 Organizer, Ketogenic Diet and Refractory Epilepsy Clinics, Division of Pediatric Neurology
- 1996 – 1997 Presentations to the Pharmacy and Therapeutics Committee on nomination of new anticonvulsants to the hospital formulary
- 1998 – 2000 Continuing Medical Education (CME) Advisory Committee
- 1998 – 1999 Interim Co-Director of Residency Training, Division of Pediatric Neurology
- 1998 – 2000 Interim Director of Clinical Services and Acting Chief, Division of Pediatric Neurology

***UNDERGRADUATE RESEARCH TRAINEES***

- 1999 Ulrike Bingel, University of Washington (Seattle)
- 2003 AK Agarwal, University of California at Irvine
- 2005 Nicole Marthaler, Barrow Neurological Institute, Phoenix, Arizona
- 2011 – 2012 Mariam Narous, University of Calgary
- 2014 – 2015 Evan Gibbard, Faculty of Science, University of British Columbia  
Fawaz Alshammari, Bachelor of Health Sciences, University of Calgary  
Amir Ahadzadeh, Bachelor of Health Sciences, University of Calgary
- 2015 – 2016 Jenna Dobry, Zoology, University of Calgary  
Noor Salem, University of Calgary
- 2016 Sierra Stingl, University of California Santa Barbara
- 2016 – 2017 Jessica Naidu, Bachelor of Health Sciences, University of Calgary  
Raven Yip, Bachelor of Health Sciences, University of Calgary
- 2017 Rejimol Perika, Bachelor of Health Sciences, University of Calgary

- 2021 – Present Yueyang Cai and Nyonika Khanna, Special Studies Coursework, Bachelor of Neurobiology and Psychology, University of California San Diego School of Medicine
- 2022 – Present Ananya Achanta, University of California San Diego

***PEDIATRIC NEUROLOGY RESIDENT TRAINEES***

- 1994 – 2000 Seattle Children’s Hospital, University of Washington School of Medicine  
 Noel Baker, MD  
 Sarah Cheyette, MD  
 Paul Golumbek, MD, PhD  
 Pierre Yves-Jeannet, MD  
 Nalini Sekaran, MD  
 Don Thai, MD
- 2000 – 2004 University of California at Irvine Hospital, Orange, California  
 Amalia Geller, MD  
 Andrew McIntosh, MD  
 Ying Peng, MD, PhD
- 2004 – 2010 Barrow Neurological Institute, University of Arizona College of Medicine  
 Daniel Arrington, MD  
 Javier Cardenas, MD  
 Eric Hastriter, MD  
 Reena Rastogi, MD  
 Laura Sweetman, MD  
 Matthew Troester, DO
- 2010 – 2019 Alberta Children’s Hospital, Cumming School of Medicine, University of Calgary  
 Momen Al-Momen, MD  
 Marvin Braun, MD, PhD  
 Lucia Capano, MD  
 Megan Crone, MD  
 Colleen Curtis, MD  
 Philip de Guzman, MD, PhD  
 Edit Goia, MD  
 Stephanie Hammond, MD  
 Natarie Liu, MD  
 Kara Murias, MD  
 Robyn McPherson, MD  
 Kenneth Myers, MD, PhD

Eric Payne, MD  
Thilinie Rajapakse, MD  
Kirsten Sjonnesen, MD  
Kristine Woodward, MD  
Jaden Wright, MD

2019 – Present      Rady Children’s Hospital, University of California San Diego  
Michael Castello, MD  
Aliya Frederick, MD  
Adam Kalawai, MD  
Kelsey Ladt, MD, PhD  
Austin Layton, MD  
Linda Nguyen, MD, PhD  
Hannah Oppenheim, MD  
Mallory Owen, MD, PhD  
Marie Sweat, MD  
Aileen Tanaka, MD  
Aditi Trivedi, MD  
Michaela Tsuha, MD  
Daanish Unwalla, MD  
Danielle Whalen, MD  
Maayan Yakir, MD  
Jennifer Yang, MD

***PEDIATRIC EPILEPSY & CLINICAL NEUROPHYSIOLOGY FELLOWSHIP TRAINEES***

2012 – 2013      Amalia Geller, MD (University of California Irvine)  
2011 – 2012      Morris Scantlebury, MD (Alberta Children’s Hospital, University of Calgary)  
2018 – 2019      Natarie Liu, MD (Alberta Children’s Hospital, University of Calgary)  
2020 – 2021      Aliyah Frederick, MD, PhD (Rady Children’s Hospital, San Diego)

***GRADUATE RESEARCH TRAINEES***

1995 – 2000      University of Washington Graduate Advisory Committee  
PhD Candidate: Beth McCarthy (Behavioral Neuroscience Program, 1995 - 2000)  
PhD Candidate: Leena Suma Patel (Neurobiology and Behavior, 2000)  
2007 – 2009      Arizona State University, Department of Bioengineering  
PhD Candidate: Steve Bellinger (co-mentored w/Peter Steinmetz, MD, PhD)

- 2007 – 2009 Arizona State University, Department of Bioengineering  
PhD Candidate: Jill Stukel
- 2011 – 2012 University of Calgary Faculty of Medicine, Neuroscience Program  
Department of Pediatrics  
MSc Candidate: Wauldron Afflick
- 2011 – 2013 University of Calgary Faculty of Medicine, Neuroscience Program  
Department of Pediatrics  
MSc Candidate: Jacklyn D. Smith
- 2012 – 2018 University of Calgary Faculty of Medicine, Neuroscience Program  
Department of Physiology and Pharmacology  
PhD Candidate: Megan Leigh Lewis
- 2013 – 2017 University of Calgary Faculty of Medicine, Neuroscience Program  
Department of Cell Biology and Anatomy  
Co-Supervisor, PhD Candidate: Pierre Wijdenes
- 2012 – 2013 University of Calgary Faculty of Medicine, Neuroscience Program  
Department of Clinical Neurosciences  
Co-Supervisor, MSc Candidate: Ahmed Hussin
- 2012 – 2013 University of Calgary Faculty of Medicine, Neuroscience Program  
Department of Cell Biology and Anatomy  
Supervisory Committee, MSc Candidate: Alexandra Wall
- 2012 – 2014 University of Calgary Faculty of Medicine, Neuroscience Program  
Department of Clinical Neurosciences  
Thesis Committee, MSc Candidate: Mohammed Almekhlafi
- 2012 – 2014 University of Calgary Faculty of Kinesiology  
Co-Supervisor, PhD Candidate: Chris Newell
- 2014 – 2015 University of Calgary Faculty of Medicine, Neuroscience Program  
Department of Physiology and Pharmacology  
Thesis Committee, PhD Candidate: Tooka Aavani
- 2013 – 2018 University of Calgary, Cumming School of Medicine  
Department of Cell Biology and Anatomy  
Co-Supervisor, PhD Candidate: Florian Hiess
- 2015 – 2017 University of Calgary, Cumming School of Medicine, Neuroscience Program

Department of Clinical Neurosciences  
Thesis Committee, MS Candidate: Ivana Kiroski

- 2017 – 2018      University of Calgary, Cumming School of Medicine, Neuroscience Program  
Department of Physiology and Pharmacology  
Thesis Committee, PhD Candidate: Charmaine I. Szalay
- 2017 – Present      University of Calgary, Cumming School of Medicine, Neuroscience Program  
Department of Pediatrics  
Primary Supervisor, PhD Candidate: Bianca Villa
- 2018      University of Queensland, Faculty of Medicine, Brisbane, Australia  
External Thesis Examiner, PhD Candidate: Tanya McDonald
- 2018      University of Toronto, Department of Pharmacology, Faculty of Medicine  
External Thesis Examiner, PhD Candidate: Krutika Joshi
- 2018 – 2019      University of Calgary, Cumming School of Medicine, Department of Neuroscience  
Supervisory Committee, PhD Candidate: Haris Malik
- 2018 – 2019      University of Calgary, Cumming School of Medicine, Department of Cell Biology  
and Anatomy  
Thesis Committee, PhD Candidate: Antis George

#### ***POST-DOCTORAL AND RESEARCH ASSOCIATE TRAINEES***

Dong Wook Kim, MD, PhD (Department of Pediatrics, Gyeongsang National University College of Medicine, Chinju, South Korea); University of Washington School of Medicine: April 1997 – August 1998.

Paul T. Golumbek, MD, PhD (Johns Hopkins University); Seattle Institute for Biomedical and Clinical Research, VA Puget Sound Health Care System, Seattle, Washington: July 2000 – June 2001.

Kristopher J. Bough, PhD (Georgetown University); University of Washington School of Medicine, Pediatric Epilepsy Research Center, Seattle, Washington: July 1999 – June 2001.

Timothy A. Simeone, PhD (Department of Pharmacology, University of Utah, Salt Lake City, UT); University of California at Irvine College of Medicine: December 2002 – June 2004; February 2005 – December 2008. Appointed as a tenure track Assistant Professor of Pharmacology at Creighton University School of Medicine.

Do Young Kim, DVM, PhD (Department of Physiology, Korea University College of Medicine, Seoul, South Korea); University of California at Irvine College of Medicine & Barrow Neurological Institute, Phoenix, AZ: April 2003 – July 2008. Appointed as Assistant Staff Scientist (Assistant Professor, tenure-track), Barrow Neurological Institute.

Marwan Maalouf, MD, PhD (Department of Neurology, University of California at Irvine College of Medicine); Barrow Neurological Institute, Phoenix, AZ: August 2004 – February 2007.

Kristina Fenoglio, PhD (Department of Anatomy & Neurobiology, University of California at Irvine College of Medicine); Barrow Neurological Institute, Phoenix, AZ: June 2006 – December 2008. Appointed as a Tenure-Track Assistant Professor of Pharmacology at Creighton University School of Medicine.

Ahn, Young-hee, PhD (Life Sciences Department, Ehwa Women's University, South Korea); Barrow Neurological Institute, Phoenix, Arizona and the Alberta Children's Hospital Research Institute, University of Calgary Faculty of Medicine: August 2009 – Present.

Ning Cheng, PhD (Neuroscience Program, Johns Hopkins University School of Medicine, Baltimore, MD); Alberta Children's Hospital Research Institute, University of Calgary Faculty of Medicine: May 2013 – July 2019.

Cezar Gavrilovici, PhD (Department of Physiology, University of Western Ontario, London, Ontario): Alberta Children's Hospital Research Institute, University of Calgary Faculty of Medicine: September 2012 – 2017. Awarded Canadian Institutes of Health Research Training Program Fellowship, 2014-2015.

Richelle Mychasiuk, PhD (University of Lethbridge, Lethbridge, Alberta, Canada): September 2012 – August 2015. Appointed as Assistant Professor, Department of Psychology, Faculty of Arts, University of Calgary.

Chun-Long Mu, PhD (Nanjing Agricultural University, Nanjing, China): September 2017 – January 2021. Post-Doctoral Research Fellow, Owerko Centre, Alberta Children's Hospital Research Institute, Cumming School of Medicine, University of Calgary.

Lourdes Fernández de Cossío, PhD (McGill University, Montreal, Canada): July 2021 – September 2021. Post-Doctoral Research Fellow, Department of Neurosciences, University of California San Diego.

Johanna Hesperger, PhD (Medical University of Vienna, Austria): November 2021 – Present. Post-Doctoral Research Fellow, Department of Neurosciences, University of California San Diego.

Jaehyouk Choi, PhD (Korea Institute of Science and Technology (KIST), UST): December 2021 – Present. Post-Doctoral Research Fellow, Department of Neurosciences, University of California San Diego.

## **OTHER EDUCATIONAL ACTIVITIES**

### UCLA School of Medicine (Los Angeles, CA)

1990 – 1991            Guest Lecturer for Educational Programs, UCLA School of Nursing & Pediatric Critical Care Nursing Division, UCLA Center for the Health Sciences, Los Angeles, CA

### University of Washington School of Medicine (Seattle, WA)

1995 – 2000            Lecturer, Neurology Resident Core Lectures, Neurology Grand Rounds, University of Washington School of Medicine, Seattle, WA

1995                    Lecturer, University of Washington School of Medicine Specialty Center CME Series, Seattle, WA

1995 – 1996            Lecturer, University of Washington Pediatric WAMI (Washington-Alaska-Montana-Idaho) Program

1995 – 1998            Lecturer, Neurological Study Unit, Department of Physiology/Biophysics, University of Washington School of Medicine, Seattle, WA

1997 – 1998            Organizer & Lecturer, Basic Neuroscience Dinner Seminar Series for Neurology and Neurosurgery Residents, University of Washington School of Medicine, Seattle, WA

1995 – 2000            Teaching Physician, NEURL 687 Child Neurology Course, University of Washington School of Medicine

1999 – 2000            Co-Organizer & Lecturer, Basic Neuroscience Review Course for Neurology and Neurosurgery Residents, University of Washington School of Medicine, Seattle, WA

### Children's Hospital & Regional Medical Center (Seattle, WA)

1995 – 2000            Lecturer, Pediatric Resident Noon Teaching Conferences

1995 – 1998            Regular Presenter, Annual North Pacific Pediatric Neurology Colloquium (rotating through Vancouver BC, Seattle WA, and Portland OR)

1997                    Lecturer, Pediatric ICU Conference Series



1998 – 1999 Organizer & Lecturer, Core Pediatric Neurology Lecture Series for Pediatric and Neurology Residents

University of California at Irvine Medical Center (Orange, CA)

2001 – 2002 Monthly In-Service Noon Lecture Series, Pediatric Specialty Clinics (Seizures/Epilepsy, Clinical and Basic Pharmacology, Pathophysiology)

2001 – 2002 Lecturer, Pediatric Ward and ICU RN In-service Training Workshops; Bi-weekly Pediatric Ward Presentations on Child Neurology Topics

2000 – 2004 Lecturer, Pediatric Resident Noon Teaching Conferences (Status Epilepticus, Hypotonia and Myopathies, Ketogenic Diet, Epileptic Syndromes in Infancy and Childhood, Update on Antiepileptic Drugs, Pediatric Brain Tumors, Headache and Migraine, Non-Epileptic Paroxysmal Disorders)

2000 – 2004 Clinic Attending, Department of Neurology Medical Student Clerkships

2001 – 2004 Faculty Support for Resident Presentations, Weekly Chief Rounds, Department of Pediatrics

St. Joseph's Hospital & Medical Center, Barrow Neurological Institute (Phoenix, AZ)

2005 Clinical Neuropharmacology Monthly Lecture Series (organizer and regular lecturer): Basic Principles of Neuropharmacology, Mechanisms of Action of Neuropsychotropic Drugs, Developmental Pharmacokinetics, Traditional Antiepileptic Drugs, The "Old New" Antiepileptic Drugs, The "New New" Antiepileptic Drugs, Benzodiazepines, Antidepressants and Antipsychotics, Pharmacological Management of Sleep Disorders, etc.

2005 – 2006 Co-Organizer, Basic Neuroscience Review Course for Residents

2007 – 2008 Coordinator, Pediatric Neurology Noon Conferences for Pediatric Residents

2008 – 2009 Organizer and Lecturer, Pediatric Neurology Core Topics, Mayo Clinic Neurology Residency Program, Scottsdale

2005 – Present Clinic Attending, Pediatric Neurology Resident Continuity Clinic

2004 – Present Lecturer, Pediatric Resident Noon Teaching Conferences

2004 – Present Lecturer, Pediatric Neurology Resident Noon Teaching Conferences

- 2004 – Present      Lecturer, Pediatric Neurosciences Grand Rounds
- 2004 – Present      Lecturer, Barrow Basic Neuroscience Seminar Series
- 2009 – Present      Lecturer, Adult Neurology Residency Noon Conference Series
- 2010                  Organizer and Sole Lecturer, Basic Neuropharmacology Board Review Course for Neurology Residents/Fellows (Introduction to Neuropharmacology, Inhibitory Neurotransmission - GABA & Glycine Receptors, Glutamate Receptors, Catecholamines and Indoleamines, Cholinergic Systems - Central, Autonomic & Neuromuscular, Neuro-psychopharmacological Agents, etc).

*Alberta Children’s Hospital, University of Calgary Faculty of Medicine (Calgary, Alberta)*

- 2010                  Organizer and Instructor, Clinical Neuropharmacology Review Mini-Course
- 2010 – 2019        Co-organizer and Faculty Participant, Resident/Fellow Educational Mini-symposia, Division of Pediatric Neurology
- 2010 – 2019        Organizer and Faculty Presenter, Weekly Didactic Pediatric Epilepsy Conference Series: “Mechanisms of Antiepileptic Drug Action,” “Rational Polypharmacy of Antiepileptic Drugs,” “Adverse Effects of Antiepileptic Drugs: Mechanisms and Principles of Clinical Management”, “Mechanisms of Drug Tolerance,” etc.
- 2011 – 2019        Principal Organizer and Co-Director, Developmental Neurosciences Grand Rounds
- 2011 – 2019        Neuropharmacology of Antiepileptic Drugs In-Service Lectures for Novel Agents Approved for Clinical Use
- 2012 – 2019        Course VI, Faculty of Medicine, University of Calgary, Pediatric Neurology Small Group (Clinical Cases)
- 2013 – 2019        Clerkship Teaching on Neurological Examination, Faculty of Medicine, University of Calgary
- 2013 – 2019        Lecturer, Ion Channel Diseases Course, Medical Science 751.09, University of Calgary Faculty of Medicine, Epilepsy: Mechanisms, Antiepileptic Drug Targets and Ion Channelopathies (Parts I and II)
- 2014                  Poster Judging Panel, Hotchkiss Brain Institute Research Symposium, June 19, 2014.

2013 – 2017            Examiner, Objective Structured Clinical Examinations (OSCEs), Adult Neurology  
and Pediatric Neurology Program, University of Calgary

2017 – 2019            Lecturer, Psychology 625 (Clinical Psychology), Department of Psychology,  
Faculty of Arts, University of Calgary

Past or Present Scientific Consultant and/or Speaker's Bureau Activity

Accera Pharma  
Ajinomoto, Inc. (USA)  
Aquestive Pharmaceuticals  
Biocodex  
Cerecin  
Cyberonics, Inc.  
Cypralis, Ltd. (UK)  
Danone Nutricia (Netherlands)  
Eisai Pharmaceuticals (USA)  
Eisai Canada  
Elan Pharmaceuticals  
Genentech  
Glaxo-Smith-Kline Pharmaceuticals  
Lundbeck Pharmaceuticals  
Lurie Children's Hospital/Northwestern University – Epilepsy Precision Medicine Initiative  
Mallinckrodt Pharmaceuticals  
Novartis Pharmaceuticals  
NPS (Natural Products Sciences) Pharmaceuticals  
Nutricia, N.A.  
Ortho-McNeil Neurologics, Johnson & Johnson  
Ovation Pharmaceuticals  
Parke-Davis/Pfizer Pharmaceuticals  
Questcor Pharmaceuticals  
Sunovion Pharmaceuticals  
Xenome Pharmaceuticals  
Xenon Pharmaceuticals  
Xcel Pharmaceuticals  
UCB Pharma (USA)  
UCB Canada  
Valeant Pharmaceuticals  
Zogenix

Conference Organizer/Chair for the following:

## *NATIONAL/INTERNATIONAL*

1. Conference Organizer and Coordinator, Pediatric Epilepsy Symposium: "Cortical Dysgenesis and Epilepsy," University of Washington School of Medicine and Children's Hospital & Regional Medical Center, Seattle, WA, April 19, 1996. CME, Category I.
2. Co-organizer, "International Conference on the Pathophysiology of Alternating Hemiplegia of Childhood," Chateau Ste. Michelle, Woodinville, WA, May 16–17, 1997.
3. Co-organizer, "Ketogenic Diet: Models and Mechanisms" Workshop, Battelle Conference Center, Seattle, WA, September 18–19, 1998.
4. Co-organizer, "Epilepsy, Infantile Spasms, and Developmental Encephalopathy," Pediatric Epilepsy Research Center, University of Washington School of Medicine, Sheraton Hotel and Towers, Seattle, WA, September 21–23, 2000. CME, Category I.
5. Co-organizer, "2<sup>nd</sup> International Ketogenic Diet Research Workshop," Pediatric Epilepsy Research Center, University of Washington School of Medicine, February 8, 2001.
6. Co-organizer, UC Irvine Epilepsy Research Center (EpiCenter) Symposium, "Hot Topics in Epilepsy," University of California at Irvine College of Medicine, March 12-13, 2004.
7. Principal Organizer, "Inaugural International Symposium on Dietary Treatments for Epilepsy and Other Neurological Disorders," Barrow Neurological Institute, Phoenix, Arizona, April 2-5, 2008.
8. Co-organizer and Moderator, "Perspectives in Epilepsy Therapeutics," Epilepsy MiniFellow Symposium XXI, American Epilepsy Society Annual Meeting, Seattle, Washington, December 6, 2008.
9. Scientific Programme Organizer, "International Symposium on Dietary Treatments for Epilepsy and Other Neurological Disorders," Edinburgh, Scotland, October 5-8, 2010.
10. Principal Organizer, "5<sup>th</sup> Global Symposium on Ketogenic Therapies: Treating Epilepsy, Brain Cancer, Autism and Cognitive Disorders," Banff, Alberta, Canada, September 20-24, 2016.
11. Organizing Committee, "Epileptic Encephalopathies in Infancy and Childhood," Satellite Symposium of the 2016 Meeting of the Canadian League Against Epilepsy (CLAE), Quebec City, Quebec, October 14, 2016.
12. Theme Convener, Neurosciences, Canadian National Perinatal Research Meeting, Banff, Alberta, February 14-17, 2018.

13. Organizing Committee, "6<sup>th</sup> Global Symposium on Ketogenic Therapies," Jeju Island, South Korea, October 2-6, 2018.
14. Organizing Committee, "7<sup>th</sup> Global Symposium on Ketogenic Therapies," Brighton, United Kingdom, October 6-10, 2020.
15. Co-organizer, Satellite Symposium on "Precision Therapeutics in Neonatal Neurology: The Role of Rapid Genome Sequencing," as part of the 2020 conjoint Child Neurology Society and International Child Neurology Association Congress, San Diego, California, October 18, 2020.
16. Organizing Committee, "5<sup>th</sup> Annual Metabolic Health Summit," Santa Barbara, California, May 6-9, 2021 – deferred to May 2022 due to COVID-19 pandemic.
17. Principal Organizer, 8<sup>th</sup> Global Symposium on Ketogenic Therapies, International Neurological Ketogenic Society, San Diego, California, September 17-22, 2023.

*LOCAL/REGIONAL*

1. Conference Co-organizer, "Office Child Neurology," University of Washington School of Medicine and Children's Hospital & Regional Medical Center, Seattle, WA, April 26, 1997. CME, Category I.
2. Course Director and Organizer, "First Annual Pacific Northwest Epilepsy Course for Residents," Battelle Conference Center, Seattle, WA, October 18, 1997.
3. Course Director and Organizer, "Migraine: Current Concepts," Battelle Conference Center, Seattle, WA, May 30, 1998. CME, Category I.
4. Course Director, "Advanced Epilepsy Imaging and Neurophysiology," Sleeping Lady Retreat and Conference Center, Leavenworth, WA, March 6–7, 1999.
5. Co-organizer, "Update in Child Neurology and Psychiatry," Children's Hospital & Regional Medical Center, Seattle, WA, May 8, 1999. CME, Category I.
6. Co-organizer, "Child Neurology Review Course for Residents," Children's Hospital & Regional Medical Center, Seattle, WA, October 2, 1999.
7. Organizer, "Clinical Uses of Anticonvulsants," Children's Hospital & Regional Medical Center, Seattle, WA, May 5, 2000. CME, Category I.

8. Co-organizer, "Epilepsy: Quest for a Cure," Sponsored by the Epilepsy Foundation of Los Angeles, Orange and San Bernardino Counties, Children's Hospital of Orange County, Orange, CA, July 12, 2003. CME, Category I.
9. Co-organizer, "Pediatric Neurology Colloquium," Pointe Hilton Squaw Peak Resort, Phoenix, AZ, February 11, 2005.
10. Co-organizer, "10th and 11th Annual Pediatric Neurosciences Symposia," Barrow Neurological Institute, Phoenix, AZ, October 2005 and October 2006.
11. Co-organizer, 20<sup>th</sup> Annual Epilepsy Update, Barrow Neurological Institute and Epilepsy Foundation Arizona, November 3, 2007.
12. Organizer, Symposium on Emerging New Treatments for Pediatric Neurological Disorders, Alberta Children's Hospital and University of Calgary Faculty of Medicine, April 12, 2012.
13. Co-organizer, Tuberous Sclerosis Symposium, Alberta Children's Hospital and University of Calgary Faculty of Medicine, May 2-3, 2012.
14. Faculty Research Day, Section of Paediatric Neurology, Alberta Children's Hospital, University of Calgary Faculty of Medicine, December 20, 2012.
15. Academic Half-Day Symposium, "Central Nervous System Infectious Diseases," Section of Paediatric Neurology, Alberta Children's Hospital, University of Calgary Faculty of Medicine, May 30, 2013.
16. International "Metabolism, Diet and Brain Cancer Workshop," University of Calgary, Hotel Alma, May 2014.
17. Co-Organizer and Host, Citizens United for Research in Epilepsy (CURE) – Chicago, IL, "International Infantile Seizures Research Workshop," Banff, Alberta, Canada, July 9-11, 2014.
18. Organizer, "Mini-Symposium on Autism Spectrum Disorder," Alberta Children's Hospital, University of Calgary Faculty of Medicine, February 19, 2015.
19. Principal Organizer, "Inaugural Robert Haslam Conference on Advances in Child Neurology and Developmental Neurosciences," Alberta Children's Hospital, University of Calgary, April 1-2, 2015.
20. Organizing Committee, "First Annual Owerko Neurodevelopment and Child Mental Health Conference: Attention Deficit Hyperactivity and Autism Spectrum Disorders:

- Genomes to Outcomes,” Alberta Children’s Hospital, University of Calgary, June 19, 2015.
21. Organizing Committee, “Metabolism and Inflammation in Pediatric Disease,” Annual Alberta Children’s Hospital Research Institute Symposium, April 6, 2016.
  22. Organizer, “Autism Spectrum Disorder Roundtable: Clinical and Translational Research Update,” Hotel Alma, University of Calgary, May 4, 2016.
  23. Co-Chair, “Sinneave Family Foundation and Alberta Children’s Hospital Research Institute Autism Roundtable,” Hotel Alma, University of Calgary, October 21, 2016.
  24. Co-Organizer, Mini-Symposium on Pediatric Neuroimaging,” Alberta Children’s Hospital, University of Calgary, January 26, 2017.
  25. Organizing Committee, “Second Annual Owerko Conference: Finding Mental Health in Neurodevelopmental Disorders,” Cumming School of Medicine, University of Calgary, June 1, 2017.

Other Organizations

- |                |   |
|----------------|---|
| 1997 – 2010    | Lecturer, Neurology for the Non-Neurologist Program, CME, Category I, Co-sponsored by the American Academy of Neurology and Medical Education Resources, Littleton, CO (Topics: The Neurological Examination; Seizures and Other Paroxysmal Disorders; Treatment of Seizures and Status Epilepticus; Sleep Disorders).  |
| 2000 – 2003    | Lecturer, National Epilepsy Educators Conference Series, Sponsored by Ortho-McNeil Pharmaceutical (Topics: Mechanisms of AED Action, Medical Intractability, AED Drug Choices, Strategies for Neuroprotection with AEDs)  |
| 2000 – Present | Lecturer, J. Kiffin Penry Epilepsy Mini-Fellowship Program and Pediatric Epilepsy Preceptorships, Wake Forest University School of Medicine, Winston-Salem, North Carolina (Topics: Overview of Pediatric Epilepsy, Mechanisms of Epileptogenesis, Mechanisms of AED Action, Pediatric Use of AEDs, Effects of Seizures on Developing Brain, Adverse Effects of AEDs, AED Interactions, Principles of Pediatric Neuropharmacology, Ketogenic Diet and Alternative Therapies, Genetic Epilepsy Syndromes, Common Metabolic Disorders Associated with Epilepsy, Acute Seizures and Status Epilepticus, Pediatric Epilepsy Case Studies, Neonatal Seizures and Infantile Spasms, Neonatal EEGs, Discontinuing AEDs, Co-Morbidities Associated with Pediatric Epilepsy, Lennox-Gastaut Syndrome, Epilepsy in Adolescents, Recently Approved Antiepileptic Drugs [Clobazam, Ezogabine, Rufinamide, Vigabatrin and Perampanel], etc.) |

## **COMMUNITY SERVICE AND MEDIA CONTRIBUTIONS**

Presentation at the Annual Epilepsy Association of Washington Consumer Fairs, Seattle Central Community College. "Brief History and Epidemiology of Epilepsy" (October 1995); "The Ketogenic Diet" (November 1999).

"The Brain" multimedia exhibit at the Annual Edmonds Elementary School Science Exposition, Edmonds, Washington, March 1997 and February 1998.

"Head Trauma and Seizures" workshops to faculty, staff, and students, Edmonds Elementary School, Edmonds, Washington, January, 1998.

"Epilepsy: Diagnosis and Treatment Options" on KOMO Radio NEWSTALK 1000's "The Medicine Man Radio Show," Seattle, Washington, February 6, 1999.

Co-organizer, "Epilepsy, the Excited Brain" exhibit at University of Washington Brain Awareness Week Open House, March 7, 2000.

Co-organizer, "Pediatric Epilepsy Public Forum" at the University of Washington Center for Urban Horticulture, April 4, 2000.

Epilepsy Foundation of Los Angeles, Orange, San Bernardino & Ventura Counties, "Knowing the Signs and Solutions for Seizures" Conference, UC Irvine Beckman Center, "Current Treatment Options for Children with Epilepsy: Overview" and "Ketogenic Diet and Antiepileptic Drugs," November 18, 2000.

County of Orange Pediatric Epilepsy (COPE) Parents Group (Parent and Family Network of the Epilepsy Foundation of America), Evening Presentations and Discussion - Pediatric Epilepsy in Orange County, California, March 23, 2001; May 24, 2002; June 25, 2004.

Organizer, Orange County Epilepsy Alliance Network conference series (involving UCI Medical Center, Hoag Hospital and Children's Hospital of Orange County), 2002 - 2003.

Epilepsy Foundation of Arizona, "Chronic and long-term side effects: What you don't know can hurt you." St. Joseph's Hospital & Medical Center, November 6, 2004.

Christ Lutheran School, Phoenix, Arizona, "Family and Social Perspectives in the Use of Neurologic and Psychiatric Medications." January 25, 2005.

Epilepsy Foundation of Arizona, Parent Support Group Discussion (Phoenix Children's Hospital), Phoenix, Arizona, "Update on Therapeutic Interventions for Pediatric Epilepsies." March 30, 2005.



Appearance on "Sonoran Living", ABC Network, Phoenix, Arizona, "Epilepsy, Infantile Spasms, Epilepsy Research." February 15, 2006.

Epilepsy Foundation of Arizona Symposium, "The Silent Issue: Epilepsy as a Cause of Death." "Hope for the Future – Epilepsy Research" presentation, Barrow Neurological Institute, January 29, 2007.

Barrow Neurological Foundation Miracle Tours Presentations to the public, "The Crossroads of Nutrition and Genetics: Becoming What You Eat," "Diet and Epilepsy: An Age-Old Connection", and "Alternative Treatment for Epilepsy: The Ketogenic Diet." May and October 2008, October 2009.

Orange County Epilepsy Support Network, Guest Speaker, "Challenges in the Lives of Patients with Epilepsy" and "Strategies to Enhance Awareness of Epilepsy Resources". Huntington Beach, California, February 2010.

Hopi Elementary School (Arcadia), Scottsdale United School District, "The Brain and You: How to Avoid Injury by Helmeting Your Head". Phoenix, Arizona, May 2010.

Alberta Children's Hospital Foundation Presentations at Public/Donor Celebration Events, "Neuroimaging at Alberta Children's Hospital," "A Vision for Brain Health in Calgary," etc., 2010-2014.

New York Times Magazine, November 17, 2010, "A Big Fat, Miracle" (by Fred Vogelstein). Featured expert on piece highlighting the ketogenic diet and epilepsy.

Television Appearances for Shaw 10 TV Calgary and Calgary City Breakfast TV shows, "Tuberous Sclerosis Complex", October 2011.

Hockey Marathon Fundraising Event, Alberta Children's Hospital, in support of Brain and Mental Health Research, Calgary Sun, May 5, 2014.

Calgary Community Education Services Presentation, "Childhood Epilepsy: Facts, Myths, and Challenges," Alberta Children's Hospital, Calgary, Alberta, January 9, 2015.

CTV National News (expert interview), "Scientists Studying Effect of Ketogenic Diet on Brain Cancer Treatment," April 10, 2016. <http://www.ctvnews.ca/health/scientists-studying-effect-of-ketogenic-diet-on-brain-cancer-treatment-1.2853439>.

1<sup>st</sup> Annual Conference on Metabolic Therapeutics and Nutritional Ketosis (<http://metabolictherapeuticsconference.com/>), "Neurological Disorders and the Ketogenic Diet". <https://www.youtube.com/watch?v=BhywHFWFABo>.

High Intensity Health <http://highintensityhealth.com/>, Ketogenic Diet Health Benefits, Mike Mutzel podcast, <https://www.youtube.com/watch?v=2EZ6pYOdqvg> or

<http://highintensityhealth.com/jong-rho-md-ketogenic-diet-explained-how-ketones-affect-metabolism-inflammation/>.

National Sports School, Calgary, Alberta. “The Teenage Brain” Presentation, February 28, 2019.

Citizens United for Research in Epilepsy (CURE) Webinar Series. “Dietary Therapies for Epilepsy: How What You Eat May Control Your Seizures”. June 13, 2019.

Nutricia Congresses. “The Mode(s) of action of the Ketogenic Diet”. Society for the Study of Inborn Errors of Metabolism, Annual Conference, Rotterdam, the Netherlands (September 2019).  
<https://www.nutriciacongresses.com/congresses/presentation/214/the-mode-s--of-action-of-the-ketogenic-diet/>

Journal of Inherited Metabolic Disease, Podcast on “Ketogenic Diets in Metabolic Disease”, September 2020. <https://soundcloud.com/user-109006120/ketogenic-diets-in-metabolic-disease>

Matthew’s Friend Charities, United Kingdom Podcast on “Ketogenic Diet: Mechanisms of Action, Have We Moved on?”, December 2020. <https://audioboom.com/posts/7773150-mechanisms-of-action-have-we-moved-on>

Matthew’s Friends United Kingdom (<https://www.matthewsfriends.org/>), Ketogenic Diet Therapies, podcast on “Ketogenic Diet Mechanisms” with Robin Williams, PhD and Jong M. Rho, MD.  
<https://we.tl/t-HPm4uGyB39>

Diegueno Middle School Parent-Teacher-Student Association (San Diego, California) Evening Talk on “A Look at a Teenager’s Brain: Neuroscience Explained” or “Why You Should Be Concerned About Brain and Mental Health!”, March 11, 2021.  
<https://vimeo.com/rchsd/review/522874232/a3a47b9352>

Rady Children’s Hospital Foundation Webinar Series, “Diet and the Brain: The Growing Scientific Connection”, April 21, 2021. <https://vimeo.com/539803245/f88eedc563>

## Community Philanthropic Fund-Raising Activities

1. Jeremy and Linda Jaech (Visio Corporation/Microsoft Corporation), Seattle, Washington, 1999-2000. \$2,000,000 to establish the Pediatric Epilepsy Research Center at the University of Washington.
2. Multiple Donors, Alberta Children's Hospital Foundation, Calgary, Alberta, Canada, 2011 – Present:
  - i. Pediatric Brain Injury Research Program (PBIRP), \$7,500,000 total, including \$1,600,000 from the Ron and Irene Ward Foundation
  - ii. Clay and Vi Riddell (Paramount Resources, Limited, Canada), \$18,000,000 total for Pain and Rehabilitation
  - iii. Stan and Marge Owerko (PetroGas, Canada), \$15,000,000 total for Epilepsy/Sleep and Neurodevelopmental Disorders and "Brain Health".
  - iv. Natland Anonymous Donor Group (Calgary, Alberta), \$5,000,000 total for Neurodevelopmental Disorders and "Brain and Mental Health".
  - v. Alberta Children's Hospital Foundation, Pediatric Neurocritical Care (NCC) Initiative (Calgary, Alberta), \$12,800,000 total for development of the integrated NCC program, involving Pediatric Intensive Care, Neonatal Intensive Care, Neurology, Neurosurgery and the Emergency Department (Alberta Children's Hospital).
3. Rady Children's Hospital Foundation (RCHF), San Diego, California
  - i. Neurodevelopmental Disorders Fellowship Funding (multiple donors), \$100,000 (July 2020 – June 2021).
  - ii. MitoKids, San Diego, California, \$60,000 inclusive of 1:1 RCHF match (July 2021 – June 2022). Additional \$25,000 donation December 2021.
  - iii. Jersey Mike's Month of Giving campaign, approximate \$473,000 (March 2021).
  - iv. Sharon D. Lund Foundation, Funding for Precision Nutrition Initiative in Brain and Mental Health, \$500,000 (November 2021 – October 2022).
  - v. Perfect Snacks, San Diego, \$75,000 (July 2022 – June 2023)
  - v. San Diego Charity Ball, \$450,000 (March 2022)

## PATENT

1. “Metabolism-Based Drug Screening Platform in Bioengineered Zebrafish”, Path Therapeutics, Inc., Calgary, Alberta, Canada. Inventors: Deborah M. Kurrasch, **Jong Rho**, Kingsley Ibhazehiebo. United States Patent Application Publication, Pub. No.” US 2016/0338327 A1, Pub. Date: November 24, 2016. PCT No. PCT/IB2015/000644 (Date July 15, 2016).

## RESEARCH STATEMENT

For over two decades, I have worked and conducted translational research in the field of epilepsy, initially with a focus on the basic mechanisms of anti-seizure drug action, and later followed by investigations into metabolism-based treatments for neurological disorders (i.e., ketogenic diets), human surgically-resected hypothalamic hamartomas, and more recently, autism spectrum disorder. With respect to the ketogenic diet, a validated treatment for medically refractory epilepsy, there is increasing evidence for potential uses in other neurological disorders such as brain cancer, neurotrauma, Alzheimer’s/Parkinson’s diseases, multiple sclerosis, and autism spectrum disorder. Indeed, the fields of metabolism and neurological diseases have recently converged in a manner such that metabolic control of neuronal homeostasis has become a more credible scientific entity. My contributions to this burgeoning area of investigation can be divided into three broad domains: (1) clinical and laboratory research; (2) public education and advocacy; and (3) academic leadership in the field of neurometabolism and epilepsy, through a combination of administrative and organizational roles in international societies, foundations and funding agencies (specifically, being on scientific advisory boards, organizing international workshops/symposia, and serving on National Institutes of Health [NINDS] and Canadian Institutes of Health Research review panels. With respect to translational epilepsy research, our laboratory has been exploring the mechanistic inter-relationships between specific metabolic substrates and enzymes (notably, ketone bodies) and cell membrane/network excitability and viability (epilepsy and neuroprotection) using a variety of model systems and experimental approaches.

## ORIGINAL PEER-REVIEWED RESEARCH PUBLICATIONS

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Matthew's Friends. In In: Masino SA, Boison D, Kossoff EH, D'Agostino D, Rho JM (Eds), Ketogenic Diet and Metabolic Therapies: Expanded Roles in Health and Disease, 2<sup>nd</sup> Edition, Oxford University Press, 2021.

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93. Shellhaas RA, de Veber G, Bonkowsky JL, and the Child Neurology Society Research Committee (Augustine EF, Bassuk AG, Calame DG, Carrasco M, Dlamini N, Felling RJ, Glass HC, Grinspan ZM, Guerriero RM, Hewitt A, Jeste S, Knowles JK, Lyons-Warren AM, Maricich SM, Musolino PL, Raju P, **Rho JM**, Rotenberg A, Sherr E, Soul JS, Ziobro J): Gene-targeted therapies in pediatric neurology: Challenges and opportunities in diagnosis and delivery, Pediatric Neurology, 2021;125:53-57.
94. Williams RSB, Boison D, Masino SA, **Rho JM**: Mechanisms of ketogenic diet action. In: Jasper's Basic Mechanisms of the Epilepsies, 5<sup>th</sup> Ed., Noebels J, Avoli M, Rogawski MA, Vezzani A, Delgado-Escueta A (Eds.), Oxford University Press, *in press*.
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#### BOOKS/SUPPLEMENTS EDITED

1. Schwartzkroin PA, **Rho JM**: The Ketogenic Diet: Models and Mechanisms, Epilepsy Research, 1999.
2. Schwartzkroin PA, **Rho JM**: Epilepsy, Infantile Spasms and Developmental Encephalopathy, International Review of Neurobiology, Volume 49, Academic Press, New York, 2002.
3. **Rho JM**, Sankar R, Cavazos JE: Epilepsy: Scientific Foundations of Clinical Practice, Marcel Dekker, Inc., New York, 2004.
4. Stafstrom CE, **Rho JM**: The Ketogenic Diet in Epilepsy: Clinical Use and Scientific Basis, Humana Press, Totowa, New Jersey, 2004.
5. **Rho JM**: New Vistas in Pediatric Epilepsy, Seminars in Pediatric Neurology, June 2005.
6. Stafstrom CE, Zupec-Kania B, **Rho JM**: International Symposium on Dietary Therapies for Epilepsy and Other Neurological Disorders, Epilepsia (Vol. 49, Supplement No. 8), 2008.
7. Chapman K, **Rho JM**: Pediatric Epilepsy Case Studies: From Infancy and Childhood through Adolescence, Taylor & Francis, 2009.

8. **Rho JM**, Sankar R, Stafstrom CE: Epilepsy: Mechanisms, Models, and Translational Perspectives, CRC Press/Taylor & Francis, 2010.
9. White HS, **Rho JM**: Mechanisms of Action of Antiepileptic Drugs, Professional Communications, Inc., West Islip, New York, 2010.
10. Pinter JD, **Rho JM**: Pediatric Neuropharmacotherapeutics, Seminars in Pediatric Neurology, 2010.
11. Jette N, **Rho JM**, Scantlebury MH, Bello-Espinosa LE, Uphill B, Claassen C. Handbook of Anticonvulsant Medications, Alberta Children's Hospital, University of Calgary, 2013.
12. Masino SA, Boison D, Kossoff EH, D'Agostino DP, **Rho JM** (Eds). Ketogenic Diet and Metabolic Therapies: Expanded Roles in Health and Disease, Oxford University Press, 2017.
13. Claassen C, Appendino JP, **Rho JM**. Anti-Seizure Medications, Alberta Children's Hospital, University of Calgary, 2019.
14. Kossoff EH, **Rho JM**. Ketogenic Dietary Therapy: A Century of Progress, Epilepsy Research Special Virtual Issue, 2020.
15. Montenegro M, **Rho JM**. Pediatric Epilepsy Case Studies: From Infancy and Childhood through Adolescence, 2<sup>nd</sup> Edition, Taylor & Francis, *in press* 2022.
16. Masino SA, Boison D, Kossoff EH, D'Agostino DP, **Rho JM** (Eds). KD100 - Ketogenic Diet and Metabolic Therapies: Expanded Roles in Health and Disease, 2<sup>nd</sup> Edition, Oxford University Press, 2022.
17. **Rho JM**, White HS: Mechanisms of Anti-Seizure Drug Action, 2<sup>nd</sup> Edition, Professional Communications, Inc., West Islip, New York, *in development*.

#### **CASE REPORTS AND LETTERS TO THE EDITOR (Peer-Reviewed)**

1. **Rho JM**, Donevan SD, Subramaniam S, and Rogawski MA: Mechanism of action of the anticonvulsant drug felbamate [Reply to Letter]. Annals of Neurology. **36**:677–678, 1994.
2. **Rho JM**, White HS, Anderson G, Donevan SD: On the anticonvulsant effect of acetone and the ketogenic diet [Reply to Letter]. Epilepsia, 43(12):1596-1597, 2002.
3. Stein D, Chetty M, **Rho JM**: A "happy" toddler presenting with sudden, life-threatening seizures. Seminars in Pediatric Neurology, 17(1):35-8, 2010.



4. Goia E, Hamilton L, Chan J, Wei XC, Mah JK, **Rho JM**. Unilateral Foot Drop as an Initial Presentation of a Brain Tumor in a Child. J Child Neurol 2014; 29(7):955-958.
5. Rajapakse T, Hinnell CJ, Wei X, Mah JK, **Rho JM**: Tinkle tinkle little girl, how we wonder why you can't: an unusual AIDP-like syndrome in a toddler, Can J Neurol Sci 2015; 42(4):274-277.
6. Myers KA, **Rho JM**, Wei XC: Teaching NeuroImages: MRI Findings in X-Linked Adrenoleukodystrophy. Neurology 2015; 85(17).
7. Klement RJ, Feinman RD, Gross EC, Champ CE, D'Agostino DP, Fine EJ, Kämmerer U, Poff A, **Rho JM**, Seyfried TN, Scheck AC. Need for new review of article on ketogenic dietary regimes for cancer patients. Med Oncol. 2017;34(6):108.
8. Almomen M, **Rho JM**, Scantlebury MH: Infantile epileptic encephalopathy with multiple genetic mutations: how important are variants of undetermined significance? Semin Pediatr Neurol, 2018; 26:33-36.

#### **OTHER PEER- AND NON PEER-REVIEWED PUBLICATIONS**

1. **Rho JM**: The ketogenic diet in pediatric epilepsy, Proceedings of Advanced Studies in Medicine (Galen Publishing), Johns Hopkins University School of Medicine, **1**(4):141-146, 2001.
2. Glauser TA, Sankar R, LEAD Faculty (**Rho JM**): Core elements of epilepsy diagnosis and management: expert consensus from the Leadership in Epilepsy, Advocacy, and Development (LEAD) faculty. Current Medical Research and Opinion, 24(12):3463-3477, 2008.
3. Stafstrom CE, **Rho JM**, Thio LL: The Ketogenic Diet Roundtable, Pediatric UPDATE (Audio & Text), Washington University School of Medicine, Volume 29, Issue 11, 2009.
4. Sankar R, Glauser TA, LEAD Faculty (**Rho JM**): Understanding Therapeutic Equivalence in Epilepsy. CNS Spectrums 15(2):112-123, 2010.
5. Sankar R, Chez M, Pina-Garza E, Dixon-Salazar T, Flamini RJ, Hyslop A, McGoldrick P, Millichap J, Resnick T, **Rho JM**, Wolf S: Proposed anti-seizure medication combinations with rufinamide in the treatment of Lennox-Gastaut Syndrome, *submitted, in review*.

#### **BOOK AND MULTIMEDIA REVIEWS**

1. Mizrahi EM & Kellaway P: Diagnosis and Management of Neonatal Seizures, Lippincott-Raven Publishers, 1998. Doody's Review Service (on-line), <http://www.doody.com>.

2. Maria BL (Ed): Current Management in Child Neurology, BC Decker, 1999. Doody's Review Service (on-line), <http://www.doody.com>.
3. Engel J & Pedley TA (Eds): Epilepsy: The Comprehensive CD-ROM (Win/Mac), Lippincott Williams & Wilkins Publishers, 1999. Doody's Review Service (on-line), <http://www.doody.com>.
4. IMDM (University of Hamburg): Voxel-Man Junior: Anatomy and Radiology in Virtual Reality Scenes – Part 1: Brain and Skull, Springer-Verlag Electronic Media, 1999. Doody's Review Service (on-line), <http://www.doody.com>.
5. Chee MWL & Chiappa KH: Waveguide. An EEG Atlas on CD-ROM, Lippincott-Raven Publishers, 1998. Doody's Review Service (on-line), <http://www.doody.com>.
6. Zhang J (Ed): Hyperbaric Oxygen for Neurological Disorders, Best Publishing Company 2008. Reviewed by: **Rho JM**, Arch Neurol. 2010; 67(11):1411-1412.

## RESEARCH GRANTS

### *Intramural*

1. Research Endowment Support Grant, Children's Hospital & Medical Center, University of Washington School of Medicine, 1995, **PI: Jong M. Rho, MD** (direct costs \$5,000), "Effects of Hypoxia on Immature Mice Lacking Expression of the Delayed Rectifier mKv1.1 Potassium Channel Protein," 7/95–6/96.
2. National Institute of Environmental Health Sciences (NIEHS), Center for Ecogenetics and Environmental Health, University of Washington, 1996, **PI: Jong M. Rho, MD** (\$ 27,975), "The Effects of Gene Dosing and Excitotoxin-mediated Injury on the Developing Brains of mKv1.1 Potassium Channel Knockout Mice," 7/96–3/97.
3. Research Endowment Support Grant, Children's Hospital & Medical Center, University of Washington School of Medicine, 1997, **PI: Jong M. Rho, MD** (direct costs \$5,000), "The Effects of the Ketogenic Diet on a Developmental Animal Model of Epilepsy," 7/98–6/99.
4. Major Collaborative Research and Pilot Grants Program, Pediatric Epilepsy Research Center (PERC), University of Washington School of Medicine, 1999–2000, Co-Director of PERC: **Jong M. Rho, MD** (\$ 660,000 total direct costs per annum); Director of PERC, Philip A. Schwartzkroin, PhD.
5. Barrow Neurological Foundation Research Grant, 2006-2007, **PI: Jong M. Rho, MD** (direct costs \$47,253), "Role of HCN Channels in Hyperthermic Seizures."

6. Barrow Neurological Foundation Research Grant, 2007-2008, **PI: Jong M. Rho, MD** (direct costs \$78,344), "Chronic Ketone Administration as a Neuroprotective Strategy for Aging."
7. Barrow Neurological Foundation Research Grant, 2007-2008, **PI: Jong M. Rho, MD** (direct costs \$26,469), "High-Capacity Network Data Storage and Analysis Software for Multi-Electrode Array Recordings in Human and Experimental Epileptic Tissue."
8. Barrow Neurological Foundation Research Grant, 2007-2008, **PI: Jong M. Rho, MD** (direct costs \$91,424), "Development of an *In Vitro* Model of the Ketogenic Diet."
9. Barrow Neurological Foundation Research Grant, 2008-2009, **PI: Jong M. Rho, MD** (direct costs \$25,000), "Ketone Bodies for Adjuvant Therapy of Brain Tumors."
10. Barrow Neurological Foundation Research Grant, 2009-2010, **PI: Jong M. Rho, MD** (direct costs \$93,474), "Pharmacological Regulation of Hippocampal Network Excitability and Propagation in *Kcna1*-null Epileptic Mice."
11. Catholic Healthcare West SEED (Support Entrepreneurial Employee Development) Fund Grant, 2009-2010, **PI: Jong M. Rho, MD** (direct costs \$17,625), "Rapid and Reliable Assessment of F2-Isoprostanes as *In Vivo* Markers of Oxidative Stress."
12. Barrow Neurological Foundation Research Grant, 2010-2011, PI: David M. Treiman, MD; **Co-I: Jong M. Rho, MD** (direct costs \$103,058), "Characterization and Pharmacological Manipulation of a Hippocampal-Parahippocampal Slice Model of Status Epilepticus Using a Multielectrode Array."
13. Alberta Children's Hospital Research Institute for Child and Maternal Health, Research Grant Application. **PI: Jong M. Rho** (direct costs, \$41,956), "Physiological Changes in L-(+)-Beta-Hydrobutyrate Levels in Medically Refractory Epileptic Patients Treated with an Anticonvulsant Ketogenic Diet" (September 2011 – August 2013).
14. Kids Cancer Care (KCC) Chair in Pediatric Oncology Grant, University of Calgary, "Novel Screening Platform to Uncover Atypical Teratoid/Rhabdoid (AT/RT) Tumor Therapeutics," **Co-I: Jong M. Rho** (Principal Investigator: Deborah Kurrasch), direct costs \$46,860 (July 2014 – June 2015).
15. Alberta Children's Hospital Research Institute and Canadian Institutes of Health Research Training Program Fellowship for Younghee Ahn, PhD (Supervisor: **Jong M. Rho, MD**), "The Neuroprotective Effects of a Ketogenic Diet in a Co-morbid Animal Model of Epilepsy and Autism," \$40,000 (September 2012 – August 2013).
16. Alberta Children's Hospital Research Institute and Canadian Institutes of Health Research Training Program Fellowship for Cezar Gavrilovici, PhD (Supervisor: **Jong M. Rho, MD**),

"Metabolic regulation of interneuron function in epileptic brain," \$80,000 (September 2014 – August 2016).

17. Markin Undergraduate Student Research Program (USRP) in Health & Wellness, University of Calgary for Ms. Raven Yip (**Supervisor: Jong M. Rho, MD**), "The role of PTEN, an autism risk gene, in the development of white matter," \$6,000 (May 2016 – August 2016).
18. O'Brien Centre for the Bachelor of Health Sciences, Cumming School of Medicine, University of Calgary (**Supervisor: Jong M. Rho**; Student: Ms. Jessica Naidu), "Impact of Ketogenic Therapies in the BTBR Mouse Model of Autism Spectrum Disorder." Total budget: \$6,000. May 2016 - August 2016.
19. University of Calgary, Faculty of Graduate Studies Alberta Vision Competition, Summer Internship Award (**Co-Supervisor: Jong M. Rho**; Student: Mr. Pierre Wijdenes), " ." Total budget: \$8,333. May 2016 – August 2016.
20. University of Calgary, Brain and Mental Health Strategic Research Fund, Hotchkiss Brain Institute Epilepsy NeuroTeam, "Center for Epilepsy Focused on the Post-ictal Period." Principal Investigators: Nathalie Jette, Cam Teskey, Paolo Federico, **Jong M. Rho** and Jeffrey R. Buchhalter, \$248,240 direct (total with matching \$496,000), 2016-2021.
21. University of Calgary, Cumming School of Medicine, Alberta Children's Hospital Research Institute, Owerko Center, Post-Doctoral Research Fellowship. Mentors: Jane Shearer and **Jong M. Rho**; Trainee: Chunlong Mu, PhD, \$30,000. September 2017 – August 2018.
22. University of Calgary, Cumming School of Medicine, Hotchkiss Brain Institute Translational Research Fund, "Vorinostat as a novel anti-seizure drug for pediatric patients with medically intractable epilepsy." Principal Investigators: Deborah Kurrasch and **Jong M. Rho**, \$124,085. April 2018 – March 2020.

### ***Extramural***

1. Epilepsy Foundation of America, Research Grants Program, Junior Investigator Research Grant, 1995, **PI: Jong M. Rho, MD** (direct costs \$30,000), "Effects of Hypoxia on Immature Mice Lacking Expression of the Delayed Rectifier mKv1.1 Potassium Channel Protein," 7/96–6/97.
2. National Institute of Neurological Disorders and Stroke, National Institutes of Health, Mentored Clinical Scientist Development Award (MCSDA, K08 series), **PI: Jong M. Rho, MD** (direct costs \$404,261; revised 6/98, \$483,561), "Potassium Channels and Epileptogenesis," 7/97–6/02.
3. Alternating Hemiplegia Foundation Research Grant, 1999, PI: Johannes F.M. van Brederode, **Co-investigator: Jong M. Rho, MD** (direct costs \$40,000), "The Effects of Flunarizine on Neocortical GABAergic and Glutamatergic Function," 7/00-6/01.

4. The Charlie Foundation (Santa Monica, California), Basic Science Collaborative Research Grant, 2002, **Co-PIs: Jong M. Rho, MD** and Carl E. Stafstrom, MD, PhD (total direct costs \$100,000), "Anti-epileptogenic Effects of a Ketogenic Diet on *Kcna1*-null Epileptic Mice," 7/02-6/04.
5. National Institute of Neurological Disorders and Stroke, National Institutes of Health, Independent Scientist Award (K02 series), **PI: Jong M. Rho, MD** (direct costs \$673,100), "GABAergic Inhibition and the Ketogenic Diet," 2/03-1/08.
6. NPS Pharmaceuticals, Inc., 2003, PI: Hans van Brederode, PhD, **Co-Investigator: Jong M. Rho, MD** (direct costs \$45,157), "The Effects of NPS-1776 on Neocortical GABAergic and Glutamatergic Function," 12/03-11/04.
7. National Institute of Neurological Disorders and Stroke, National Institutes of Health, Exploratory/Developmental Grant (R21), PI: Patrick Sullivan, PhD; **Co-investigator: Jong M. Rho, MD** (direct costs \$275,000), "Oxidative Stress and the Ketogenic Diet," 7/04-6/06.
8. National Institute of Neurological Disorders and Stroke, National Institutes of Health, Multicenter Study, "Childhood Absence Epilepsy: Rx, PK-PD-Pharmacogenetics," 11/05-10/08, Site **Co-Investigator: Jong M. Rho, MD** (total costs: \$134,154).
9. Parents Against Childhood Epilepsy (PACE) Grant Application, 2006, **PI: Jong M. Rho, MD** (direct costs: \$48,860), "Ketone and Oxidant Modulation of Mitochondrial Ion Channels," 7/06-6/07.
10. Citizens United for Research in Epilepsy (CURE) Grant Application, 2007, **PI: Jong M. Rho, MD** (direct costs per year: \$42,266), "A Planar Multi-electrode Array Analysis of Surgically Resected Human Hypothalamic Hamartoma Tissue," 1/07-12/07.
11. National Institute of Neurological Disorders and Stroke, National Institutes of Health, Exploratory/Developmental Grant (R21), **PI: Jong M. Rho** (direct costs \$274,775), "Mechanisms of Seizure Genesis in Human Hypothalamic Hamartomas," awarded 4/1/08-3/31/10.
12. Takeda Pharmaceuticals North America Research Grant, **Laboratory Co-PI: Jong M. Rho** (direct costs \$119,910), "Efficacy of Ramelteon in Animal Models of Chronic Limbic Epilepsy: A Pilot Study," awarded Sept. 2007.
13. National Institute of Neurological Disorders and Stroke, National Institutes of Health, R13 Conference Grant; **PI: Jong M. Rho** (direct costs \$10,000), "International Symposium on Dietary Therapies for Epilepsy and Other Neurological Disorders," awarded March 2008.
14. American Epilepsy Society, Research and Training Workshop Grant Application; **PI: Jong M. Rho** (direct costs \$10,000), "International Symposium on Dietary Therapies for Epilepsy and Other Neurological Disorders," awarded January 2008.

15. Arizona Biomedical Research Commission; **PI: Jong M. Rho** (direct costs, \$150,000), "Epilepsy-Induced Impairment of Circadian Rhythms," awarded June 2008 (7/08-6/11).
16. Ortho-McNeil Janssen Scientific Affairs, LLC (Johnson & Johnson); **PI: Jong M. Rho** (total costs, \$50,211), "Neuroprotective Effects of Carisbamate (RWJ-333369)," awarded October 2008 (9/09-8/10).
17. Questcor Pharmaceuticals; **PI: Jong M. Rho** (total costs, \$77,674), "The Functional Neuroprotective Effects of Adrenocorticotrophic Hormone (ACTH) in Epileptic Hippocampus," awarded October 2008 (5/09-4/10).
18. SHS/Nutricia N.A. Investigator-Initiated Research Grant, 2009, PI: Adrienne Scheck, PhD; **Co-Investigator: Jong M. Rho, MD** (direct costs: \$109,946), "Anti-Neoplastic Effects of KetoCal™ in a Mouse Brain Tumor Model," awarded 2/09 (7/09-6/10).
19. Arizona Biomedical Research Commission; PI: Adrienne Scheck, **Co-I: Jong M. Rho** (direct costs, \$150,000), "The Use of Ketones as an Adjuvant Therapy for Malignant Gliomas," awarded June 2008 (7/09-6/12).
20. Phoenix Children's Hospital Neuroscience Institute; PI: Lucy J. Treiman, **Co-I: Jong M. Rho** (direct costs, \$150,000), "A Mouse Model of Post-Traumatic Epileptogenesis," awarded June 2009 (8/09-7/10).
21. National Institute of Neurological Disorders and Stroke, National Institutes of Health, Research Program Grant (R01), **PI: Jong M. Rho**, Co-I: James Geddes (direct costs \$1,250,000; indirect \$1,058,750), "Metabolic Mechanisms of Functional Neuroprotection in Epileptic Brain," *5th Percentile, Awarded August 2010.*
22. Arizona Biomedical Research Commission; PI: Do Young Kim, **Co-I: Jong M. Rho** (direct costs, \$150,000), "Multiple Sclerosis-Induced Impairment of Learning and Memory," awarded July 2010 (7/10-6/13).
23. Xenome Pharmaceuticals; **PI: Jong M. Rho** (direct costs, \$24,365), "Electrophysiological Effects of Xen2174 in Normal Rodent Hippocampus," awarded January 2010 (March - September 2010).
24. Xenome Pharmaceuticals; PI: Do Young Kim, **Co-I: Jong M. Rho** (direct costs, \$24,365), "Comparison of the Electrophysiological Effects of Xen2174 With The Anticonvulsant Levetiracetam and Reboxetine, A Norepinephrine Transporter Blocker, In *In Vitro* Seizure Models," awarded May 2010 (September 2010 – June 2011).
25. Canadian Institutes for Health Research (CIHR), Operating Grant. **PI: Jong M. Rho**, "Modulation of Brain-Specific ATP-Sensitive Potassium Channels by Physiological Stereoisomers of the

Primary Ketone Body Beta-Hydroxybutyrate". Total budget: \$712,613. April 2012 – March 2017). *2<sup>nd</sup> percentile*.

26. Genome Canada, Multi-Centre Research Grant, "Personalized Medicine in the Treatment of Epilepsy", **Co-I: Jong M. Rho**. Total multi-center budget: \$15,923,643. PIs: Patrick Cossette (McGill University), Berge Minassian (University of Toronto).
27. Mito Canada, "Mesenchymal Stem-Cell Based Mitochondrial Transfer for the Treatment of Mitochondrial Disease", **Co-I: Jong M. Rho**. Total budget: \$50,000. PI: Jane Shearer (University of Calgary), 2012-2014.
28. Brain Canada Platform Support Grant, "A Novel Zebrafish-Based Platform for Anticonvulsant Drug Development", **Co-PI: Jong M. Rho** (Co-PI: Deborah Kurrasch). Total budget: \$3,000,000. 2014-2017.
29. Alberta Innovates Health Solutions Graduate Studentship, "Ryanodine Receptor Distribution, Dynamics and Function in Heart and Brain," Florian Hiess, PhD candidate (**Co-Mentor: Jong M. Rho**), Total budget \$120,000. 2015-2019.
30. Branch Out Neurological Foundation Fellowship (**Supervisor: Jong M. Rho**; Student: Ms. Jenna Dobry), "Molecular Biological Studies of the BTBR Model of Autism Spectrum Disorder." Total budget: \$7,000. May 2015 - April 2016.
31. Branch Out Neurological Foundation Fellowship (**Supervisor: Jong M. Rho**; Student: Ms. Jessica Naidu), "The Effects of the Ketogenic Diet on Vocalization in a Mouse Model of Autism Spectrum Disorder." Total budget: \$7,000. May 2016 - August 2016.
32. Alberta Innovates Health Solutions Summer Studentship (**Supervisor: Jong M. Rho**; Student: Ms. Raven Yip), "The role of PTEN, an autism risk gene, in the development of white matter." Total budget: \$6,000. May 2016 – August 2016.
33. Canadian Institutes for Health Research (CIHR), Project Scheme Funding Pilot, Spring 2016. **Jong M. Rho (NPA)**, "Ketone-Mediated Epigenetic Modulation of Mitochondrial Function in Epileptic Brain". \$1,119,995. September 2016 – August 2021. *2<sup>nd</sup> percentile*.
34. National Institute of Neurological Disorders and Stroke, National Institutes of Health, R13 Conference Grant NIH RNS096938A; **Co-PI: Jong M. Rho**, PI: Susan Masino (direct costs \$15,000), "Fifth Global Symposium on Ketogenic Therapies," awarded April 2016.
35. Alberta Innovates Health Solutions, Community Engagement and Conference Grant, **PI: Jong M. Rho**, (direct costs \$7,500), "Fifth Global Symposium on Ketogenic Therapies," awarded March 2016.

36. Branch Out Neurological Foundation Graduate Fellowship (**Co-Supervisor: Jong M. Rho;** Graduate Student: Ms. Megan Leigh Lewis), "Utilizing Ketogenic Diet in a Novel Co-morbid Mouse Model of Autism Spectrum Disorder and Epilepsy." Total budget: \$26,500. July 2016 - June 2017.
37. Branch Out Neurological Foundation Fellowship (**Supervisor: Jong M. Rho;** Student: Rejimol Perika), "Investigating the effects of Glycolytic Inhibition in the BTBR T+tf/J Mouse Model of Autism." Total budget: \$7,000. May 2017 - August 2017.
38. Canadian Institutes for Health Research (CIHR), Project Grant Competition, Fall 2017. Ray Turner (Principal Investigator), **Jong M. Rho (Co-Investigator)**, "Regulation of an ion channel complex in Fragile X syndrome." Total budget: \$971,550. March 2018 – February 2023.
39. National Institute of Neurological Disorders and Stroke, National Institutes of Health, R13 Conference Grant NIH R13NS106921; **Co-PI: Jong M. Rho**, PI: Susan Masino (direct costs \$20,000), "Sixth Global Symposium on Ketogenic Therapies," awarded April 2018.
40. Dravet Canada, Research Grant; **Co-PI: Jong M. Rho**, PI: Deborah Kurrasch (direct costs \$17,500), "The Identification of Drugs That Improve Core Autism Symptoms in Dravet Zebrafish Models," awarded March 2018.
41. Scottish Rite Charitable Foundation; **Co-Investigator: Jong M. Rho**, PI: Timothy Shutt (direct costs \$120,000), "Targeting Mitochondrial Form and Function in Autism Spectrum Disorder," awarded October 2018 – September 2021.
42. Canadian Institutes for Health Research (CIHR), Project Grant Application, Fall 2018. **Jong M. Rho (Principal Applicant)**, (Direct Costs: \$998,325). "Effects of Cannabidiol on Cellular and Mitochondrial Metabolism: Implications for the Epileptic Brain," awarded March 2019 – February 2024.
43. National Institute of Neurological Disorders and Stroke, National Institutes of Health, R21 NS104513. **PI: Jong M. Rho**, July 2019 – March 2021 (PI Transfer), "Metabolic role of the neuronal Na<sup>+</sup>-dependent citrate transporter implicated in epilepsy" (Direct Costs: \$275,000). Original PI: Anne Murphy, PhD and Ana M. Pajor, PhD (University of California San Diego). Awarded, April 2018 – March 2020.
44. National Institute of Neurological Disorders and Stroke, National Institutes of Health, R21. **PI: Jong M. Rho**. "Mitigation of Hippocampal Interneuronopathy by Targeted Deletion of Cyclophilin D in Epileptic Brain". In Revision.
45. National Institute of Neurological Disorders and Stroke, National Institutes of Health, R21. **PI: Jong M. Rho**. "Stereoselective Effects of Beta-Hydroxybutyrate on Brain Mitochondrial Metabolism in Epilepsy" (Direct Costs: \$275,000). In Revision.



46. Hartwell Individual Biomedical Research Awards, PI: Johannes Schoeneberg, **Co-PI: Jong M. Rho**. “Fast 3D Time-Lapse Subcellular Imaging in Restoring Mitochondrial Dynamics as a Cure for Drug-Resistant Epilepsy” (Direct Costs: \$300,000). Awarded, July 2021 – June 2024.
47. Canadian Institutes for Health Research (CIHR), Project Grant Application, Spring 2021. PIs: Morris Scantlebury & Quentin Pittman (University of Calgary); **Jong M. Rho (Co-Applicant)**. “The Role of the Acid-Sensing Ion Channel (ASIC) in the Mechanism of Action of the Ketogenic Diet in Infantile Spasms”. (Direct Costs: \$1,565,000) Awarded, July 2021 – June 2026.
48. Canadian Institutes for Health Research (CIHR), Project Grant Application, Spring 2022. PIs: Jane Shearer and Morris Scantlebury (University of Calgary); **Jong M. Rho (Co-Applicant)**, “Nutritional Manipulation of the Gut-Brain-Axis in Epilepsy”. (Direct Costs: \$699,976). Awarded, July 2022 – June 2027.

## **PUBLISHED ABSTRACTS**

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121. Cheng N, Khanbabaei M, Hughes E, Tobias R, **Rho JM**. Disruption of circuit formation and refinement in a mouse model of autism. Society for Neuroscience Meeting, Chicago, IL, October 2015.
122. Ahn Y, Mychasiuk R, Cheng N, Yee NC, Tobias R, **Rho JM**. Alterations in complex II of the electron transport chain are associated with elevated mitochondrial respiration in the BTBR mouse model of autism spectrum disorder. Society for Neuroscience Meeting, Chicago, IL, October 2015.

123. Alshammari F, Cheng N, Khanbabaei M, Hughes E, Tobias R, **Rho JM**. Development of dendritic structure in the BTBR mouse model of autism. Society for Neuroscience Meeting, Chicago, IL, October 2015.
124. Ahn BY, Ahn Y, Dang NHT, Weljie AM, **Rho JM**, Senger DL. Bioenergetic adaptation of invasive glioma: a complication of therapeutic targeting? Society for Neuroscience Meeting, Chicago, IL, October 2015.
125. Gavrilovici C, Jiang Y, Chansard M, Gao F, Liu RH, Parsons K, Park SK, Tobias R, Scott L, Kiroski I, Teskey GC, Tsai LH, **Rho JM**, Nguyen MD. Spontaneous recurrent seizures and hippocampal structural pathology in Ndel1 conditional knockout mice. Society for Neuroscience Meeting, Chicago, IL, October 2015.
126. Gavrilovici C, Simeone TA, **Rho JM**: Interneuronopathy in the *Kcna1*-null mouse model of epilepsy. American Epilepsy Society Meeting, Philadelphia, Pennsylvania, December 2015.
127. **Rho JM**, Smith J, D'Alfonso S, Singer R, Connolly M, Mouchlas A, Fung E, Sinasac D, Singh N, Buchhalter JR: Blood Beta-hydroxybutyrate levels correlate with seizure frequency in epileptic patients treated with the ketogenic diet. American Epilepsy Society Meeting, Philadelphia, Pennsylvania, December 2015.
128. Ahn Y, Salem N, Ahn BY, Tobias R, Robbins SM, Senger DL, **Rho JM**: Increased phosphorylation of the mitochondrial fission protein DRP1 in p75 neurotrophin receptor (p75NTR)-induced glioma. Alberta Children's Hospital Research Institute Annual Symposium, April 2016.
129. Vijayashankara J, Cheng N, **Rho JM**, Antle MC: Circadian abnormalities in the BTBR mouse model of autism spectrum disorder. Society for Research on Biological Rhythms Meeting, Palm Harbor, Florida, May 2016.
130. Cheng N, Alshammari F, Khanbabaei M, Hughes E, Tobias R, Murari K, **Rho JM**: Disrupted short- and long-range neural connectivity in a mouse model of autism. International Meeting for Autism Research, Baltimore, Maryland, May 2016.
131. Chard M, Sabo K, Klassen K, Moorjani V, **Rho JM**, Al-Hertani W: Novel WDR45 mutation identified in a patient diagnosed with beta-propeller protein associated neurodegeneration. Canadian College of Medical Geneticists Annual Meeting, Edmonton, Alberta, June 2016.
132. Gavrilovici C, Jiang Y, Chansard M, Gao F, Liu RH, Parsons K, Park SK, Tobias R, Scott L, Kiroski I, Teskey GC, Tsai LH, **Rho JM**, Nguyen MD: Hippocampal structural pathology and spontaneous recurrent seizures in Ndel1 conditional knockout mice. Gordon Research Conference, Mechanisms of Epilepsy and Neuronal Synchronization, Girona, Spain, August 2016.

133. Ahn BY, Ahn Y, Dang NHT, Weljie AM, **Rho JM**, Robbins SM, Senger DL: Metabolic Diversity and Adaptability of Glioblastoma: A Complication to Therapeutic Targeting? 5<sup>th</sup> Global Symposium on Ketogenic Therapies, Banff, Alberta, September 2016.
134. Mayr K, Sharma S, Mandadi S, Brett R, **Rho JM**, Whelan PJ: Ketogenic diet as a mild analgesic for lower limb pain following SCI in mice. 5<sup>th</sup> Global Symposium on Ketogenic Therapies, Banff, Alberta, September 2016.
135. Pittman QJ, Lewis ML, Gomez CD, **Rho JM**, Acherjee S: Neonatal inflammation alters hippocampal electrophysiological properties and predisposes to co-morbid epileptiform activity in a mouse model of autism. Immunity and Inflammation Meeting 2016, Milan, Italy, October 13-15, 2016.
136. Cheng N, Khanbabaie M, Hughes E, Murari K, **Rho JM**: Regulating ERK signaling improves vocal communication in a mouse model of autism. Society for Neuroscience Meeting, San Diego, CA, November 2016.
137. Ahn Y, Salem N, Ahn BY, Tobias R, Robbins SM, Senger DL, **Rho JM**: Increased phosphorylation of the mitochondrial fission protein DRP1 in p75 neurotrophin receptor (p75<sup>NTR</sup>)-induced glioma. Society for Neuroscience Meeting, San Diego, CA, November 2016.
138. Ahn Y, Yee NC, Tobias R, **Rho JM**: Ketogenic diet restores impaired mitochondrial respiration and electron transport chain activity in autistic BTBR mice. Society for Neuroscience Meeting, San Diego, CA, November 2016.
139. Gavrilovici C, Jiang Y, Chansard M, Gao F, Liu RH, Parsons K, Park SK, Tobias R, Scott L, Kirovski I, Teskey GC, Tsai LH, **Rho JM**, Nguyen MD: Ndel1 conditional knockout mice exhibit morphofunctional hippocampal alterations and spontaneous recurrent seizures. American Epilepsy Society Meeting, Houston, TX, December 2016.
140. Wijdenes P, Gavrilovici C, Armstrong R, Dalton C, **Rho JM**, Syed NI: High-resolution recording of seizure-like network activity using novel 3-dimensional gold micro-electrodes. American Epilepsy Society Meeting, Houston, TX, December 2016.
141. Wijdenes P, Armstrong R, Gavrilovici C, **Rho JM**, Syed NI, Dalton C: Novel 3-dimensional gold micro-electrodes allow high resolution neural network recording. Conference on Microfluidics, BioMEMS and Medical Microsystems XV, SPIE BiOS Photonics West – International Society for Optics and Photonics, San Francisco, CA, January 2017.
142. Oh H, Ma SC, Shackelford AJ, **Rho JM**, Kim DY: Sirtuins confer the neuroprotective activity of the ketogenic diet and the ketone body  $\beta$ -hydroxybutyrate. Society for Neuroscience Meeting, Washington DC, November 2017.

143. Lewis ML, **Rho JM**, Pittman QJ: Co-morbid epilepsy in a mouse model of autism spectrum disorder. Society for Neuroscience Meeting, Washington DC, November 2017.
144. Chun KC, Ma SC, Oh HG, Choi HJ, **Rho JM**, Kim DY: Ketogenic diet-induced extension of longevity in epileptic *Kcna1*-null mice is influenced by gender and at treatment onset. Society for Neuroscience Meeting, Washington DC, November 2017.
145. Oh H, Ma SC, Shcakelford AJ, **Rho JM**, Kim DY: Sirtuins confer the neuroprotective activity of the ketogenic diet and the ketone body  $\beta$ -hydroxybutyrate. Society for Neuroscience Meeting, Washington DC, November 2017.
146. Ahn Y, Drummond-Main C, Yee NC, Kim DY, **Rho JM**: Effects of cannabidiol on mitochondrial bioenergetics and homeostasis. American Epilepsy Society Meeting, Washington, DC, December 2017.
147. Kesler M, Cheng N, Hughes E, Ahn Y, Tobias R, Kim DY, **Rho JM**: Cyclophilin D deletion ameliorates seizure frequency and burden in epileptic *Kcna1*-null mice. American Epilepsy Society Meeting, Washington, DC, December 2017.
148. Gavrilovici, Simeone TA, **Rho JM**: Hippocampal interneuron dysfunction in the *Kcna1*-null mouse model of epilepsy. American Epilepsy Society Meeting, Washington, DC, December 2017.
149. Le VA, Kesler M, **Rho JM**, Cheng N, Murari K: Rodent sleep assessment with a trainable video-based approach. IEEE International Conference on Acoustics, Speech and Signal Processing, Calgary, Alberta, Canada, April 15-20, 2018.
150. Vijayashankara J, Cheng N, **Rho JM**, Antle MC: Characterization of circadian behaviour in the BTBR mouse model of autism spectrum disorder. Society for Research on Biological Rhythms Conference, Amelia Island, Florida, May 12-16, 2018.
151. Bello-Espinosa LE, Appendino JP, Ho A, **Rho JM**, Scantlebury MH: Use of artisanal cannabidiol among children with treatment-resistant epilepsy in Southern Alberta. American Epilepsy Society Meeting, New Orleans, LA, December 2018.
152. Mu C, Choudhary A, Charkhad B, Barrett K, Shearer J, **Rho JM**, Scantlebury MH: The ketogenic diet alters the gut microbiome in the triple-hit rodent model of infantile spasms. American Epilepsy Society Meeting, New Orleans, LA, December 2018.
153. Ahn Y, Villa B, Ahn BY, Senger DL, **Rho JM**: Profiling of brain inflammatory mediators following ketogenic diet treatment in epileptic *Kcna1*-null mice. American Epilepsy Society Meeting, New Orleans, LA, December 2018.

154. Ahn Y, Drummond-Main C, Kiroski I, **Rho JM**: Cannabidiol impairs mitochondrial function independent of CB1 and GPR55 receptors. American Epilepsy Society Meeting, New Orleans, LA, December 2018.
155. Zhan X, Cheng N, Asmara H, Delgado ES, Sahu G, Zhang F, Szalay C, **Rho JM**, Zamponi GW, Turner RW: Regulation of mossy fiber-granule cell LTP in Fragile X by a Cav3-Kv4-FMRP complex. Society for Neuroscience Meeting, San Diego, California, November 2018.
156. Hughes E, Khanbabaei M, Murari K, Turner RW, **Rho JM**, Cheng N: Specifically targeting ERK signaling ameliorates core deficits in mouse models of autism. Canadian Association for Neuroscience Annual Meeting, Toronto, Ontario, Canada, May 22-25, 2019.
157. Villa BR, Gavrilovici CN, Teskey G, **Rho JM**: Targeted deletion of mitochondrial cyclophilin D mediates neuroprotection in hippocampal CA1 in epileptic brain. Society for Neuroscience Meeting, Chicago, Illinois, October 19-23, 2019.
158. Chen X, Kesler M, Mu C, Hughes E, D'Agostino DP, **Rho JM**: The effects of ketone ester supplementation on seizure activity and gut microbiome composition in epileptic *Kcna1*-null mice. American Epilepsy Society Meeting, Baltimore, MD, December 2019.
159. Liu N, Scantlebury M, Appendino JP, Buchhalter J, Bello-Espinosa L, Ho A, Claassen C, MacAllister W, **Rho JM**, Mineyko A: Treatment of Continuous Spike and Waves During Sleep (CSWS) at the Alberta Children's Hospital: A Collaboratively Developed Protocol. North American Epilepsy Congress, Toronto, Canada, September 27-30, 2020.
160. Gavrilovici C, Ahn Y, **Rho JM**: The effects of novel cyclophilin D inhibitors on mitochondrial permeability transition pore opening. American Epilepsy Society Meeting, Seattle, WA, December 2020.
161. Wigby K, Lenberg J, Clarke C, Dimmock D, Bainbridge M, Jones M, **Rho J**, Hobbs C, Friedman J: Building the foundation of a precision genomic medicine clinic for rare and undiagnosed disorders at Rady Children's Hospital. 2021 Frontiers in Pediatric Genomic Medicine Conference (Virtual), Rady Children's Hospital and University of California San Diego, April 21-23, 2021.
162. Lawson J, Menzies J, Truong L, Kossoff E, **Rho J**, Lux A, Chow L, Presanis J, Henderson A, Morimoto B, Walker J: A pilot study of CER-0001 in infantile spasms. 13<sup>th</sup> Asian and Oceanian Epilepsy Congress (Virtual), International League Against Epilepsy, June 10-13, 2021.
163. Mu CL, Nikpoor N, Thomas T, Choudhary A, Wang M, **Rho JM**, Scantlebury MH, Shearer J: Targeted gut microbiota manipulation reduces seizures in a model of infantile spasms syndrome. North American Epilepsy Congress 2022, online. May 2022.
164. Mu C, Nikpoor N, Tompkins TA, Choudhary A, Wang M, Marks WN, **Rho JM**, Scantlebury MH, Shearer J: Targeted gut microbiota manipulation attenuates seizures in a model of infantile



spasms syndrome. Having IMPACTT 2: Advancing Microbiome Research Conference. Canmore, Alberta. June 2-3, 2022.

165. Mu C, Tompkins TA, **Rho JM**, Scantlebury MH, Shearer J: Gut-based manipulations spur hippocampal mitochondrial bioenergetics in a model of pediatric epilepsy. 2022 Owerko Centre Conference. University of Calgary, Calgary, AB. June 7, 2022.
166. Mu C, Tompkins TA, **Rho JM**, Scantlebury MH, Shearer J. Metabolite-Microbiome Signatures of Probiotic Induced Mitochondrial Adaptation in a Model of Epilepsy. Annual Conference of the Metabolomics Society. Metabolomics 2022 Valencia, Spain. June 19-23, 2022.
167. Trivedi A, Yang J, Ladt K, **Rho JM**: Successful treatment of status epilepticus in a patient with a novel phenotype of an ATP1A2 missense mutation known to cause hemiplegic migraines, Child Neurology Society Meeting, Cincinnati, Ohio, October 12-15, 2022.
168. Liaqat R, Verhagen A, Swan J, **Rho J**, Varki A, Chen D: Molecular characterization of human-specific SIGLEC16P, Society for Glycobiology Annual Meeting, Amelia Island, Florida, October 2-5, 2022.
169. Choi J, Wang S, Cai Y, Achanta A, **Rho JM**: Ketogenic diet regulates the passive conductance of hippocampal astrocytes. 14<sup>th</sup> International Conference on Brain Energy Metabolism, Santa Fe, New Mexico, October 24-27, 2022.
170. Choi J, Wang S, Fliri H, **Rho JM**: The novel cyclophilin D inhibitor CC-2055 exerts anti-seizure effects in the mouse pilocarpine model of epilepsy via rescue of hippocampal parvalbumin—positive interneurons. American Epilepsy Society Meeting, Nashville, TN, December 2022.
171. Yakir M, Most D, Hermel J, Zimbric M, Friedman J, **Rho JM**: Pediatric opsoclonus-myoclonus-ataxia syndrome in the setting of COVID-19. American Academy of Neurology Meeting, Boston, MA, April 2023.

## SELECTED INVITED PRESENTATIONS

### NATIONAL/INTERNATIONAL

1. Psychiatry Grand Rounds, Department of Psychiatry, University of Maryland, November 1992. "Psychopharmacology of Pediatric Migraine."
2. Platform Presentation at American Epilepsy Society Annual Meeting, Miami, Florida, December 1993. "Felbamate inhibits NMDA responses and potentiates GABA responses in cultured rat hippocampal neurons."

3. Platform Presentation at First Conjoint Meeting of the Child Neurology Society and the International Child Neurology Association, San Francisco, CA, October 1994. "Evidence for the barbiturate-like actions of the dicarbamates felbamate and meprobamate."
4. Neurology Grand Rounds, Department of Neurology, University of New Mexico School of Medicine, March 1994. "Mechanisms Underlying Antiepileptic Drug Action."
5. Neurology Grand Rounds, Department of Neurology, University of Washington School of Medicine, April 1994. "Felbamate: Mechanisms Underlying its Anticonvulsant and Neuroprotective Actions."
6. American Academy of Family Practice, Annual Board Review Course, Seattle, Washington, May 14-15, 1997, "Seizures, Epilepsy and Status Epilepticus."
7. International Conference on the Pathophysiology of Alternating Hemiplegia of Childhood, Chateau Ste. Michelle, Woodinville, Washington, May 16-17, 1997, "Flunarizine: What Underlies its Efficacy?"
8. Clinical Neuroscience Grand Rounds, University of Calgary, Alberta, June 5, 1998. "Potassium Channels and Epileptogenesis."
9. Neurology Grand Rounds, Department of Neurology, University of Southern California School of Medicine, August 1998, "Ion Channels and Seizures."
10. Neurology Grand Rounds, Department of Neurology, Cedars-Sinai Medical Center, Los Angeles, California, August 1998, "Anticonvulsants, Ion Channels and Epilepsy."
11. Special Presentation, Department of Pediatrics, UCLA Medical Center, Los Angeles, California, August 1998, "Potassium Channels and Epileptogenesis."
12. "The Ketogenic Diet: Mechanisms and Models, A Regional Workshop," University of Washington, Battelle Conference Center, Seattle, Washington, September 1998, "The Ketogenic Diet and Ketones: What is Sufficient and Necessary for Seizure Control?"
13. Platform Presentation at American Epilepsy Society Annual Meeting, Orlando, Florida, December 1999. "GABA Levels are Increased in the Hippocampus of Mature Mice Fed a Ketogenic Diet."
14. Platform Presentation at American Epilepsy Society Annual Meeting, Orlando, Florida, December 1999. Dibenzylamine, a contaminant in L-(R)-hydroxybutyrate, exhibits anticonvulsant actions via blockade of N-methyl-D-aspartate receptors.

15. Research Seminar, "The Ketogenic Diet: Models and Mechanisms," Epilepsy Research Branch, National Institute of Neurological Disorders and Stroke, National Institutes of Health, Bethesda, Maryland, March 2000.
16. Grand Rounds, Department of Pediatrics, UCLA Medical Center, Los Angeles, April 2000, "Childhood Migraine: Pharmacology and Pathophysiology."
17. Grand Rounds, Department of Anatomy and Neurobiology, UC Irvine Medical Center, Irvine, California, April, 2000, "Electrophysiological and Developmental Characterization of the Kv1.1 Potassium Channel Knockout Mouse."
18. Grand Rounds, Department of Pediatrics, UC Irvine Medical Center, Irvine, California, April 2000, "Paroxysmal Neurological Disorders: The role of Ion channels in their Pathophysiology."
19. 11<sup>th</sup> IASSID (International Association for Scientific Study of Intellectual Disabilities) World Congress, Seattle, Washington, August 2000. "Medical Treatments for Pediatric Epilepsies."
20. Satellite Symposium, "Pediatric Epilepsy: From Bench to Clinical Practice." American Epilepsy Society Annual Meeting, December 2000. "Pediatric Drug Development: The Biochemical and Mechanistic Approach."
21. The Johns Hopkins University Institute for Advanced Studies, Pediatric Epilepsy Roundtable, Aspen, CO, January 2001. Invited lecturer and discussant; "The Ketogenic Diet."
22. 2<sup>nd</sup> International Ketogenic Diet Research Workshop, Pediatric Epilepsy Research Center, University of Washington School of Medicine, Seattle, WA, February 2001. "Metabolic and Behavioral Correlates of the Ketogenic Diet."
23. International Epilepsy Research Conference, Focus on Epilepsy VI: Treatment of Epileptic Syndromes - From Molecular Targets to Quality of Life, Mont-Tremblant, Quebec, Canada, July 2001. "The Mechanistic Bases of the Ketogenic Diet," and "AEDs and Neuroprotection: Which Mechanisms are Relevant?"
24. University of New Mexico School of Medicine, Department of Neurology, 1st Annual Epilepsy Symposium, Albuquerque, New Mexico, October 2001 (Category I CME). "Rational Sequencing of Antiepileptic Drugs in Childhood Epilepsy."
25. Rush-Presbyterian Hospital, Comprehensive Epilepsy Center, Chicago, IL, March 2002. "Strategies and Limitations in the Use of Antiepileptic Drugs."
26. Oregon Health Sciences University, Department of Neurology Grand Rounds, June 2002. "The Ketogenic Diet: Basic Mechanisms of Action."

27. American Epilepsy Society Annual Meeting, TOP Scholar (Epilepsy Fellows) Presentation, "When to Start and Stop AED Therapy," Seattle, WA, December 2002.
28. University of Texas at San Antonio Health Sciences Center, Department of Neurology Grand Rounds, March 2003. "Mechanisms Underlying the Anticonvulsant and Neuroprotective Actions of the Ketogenic Diet."
29. University of Chicago Pritzker School of Medicine, Department of Pediatrics Research Seminar, Chicago, IL, April 2003. "Potassium Channel Defects in Epilepsy."
30. Rush Medical School, Department of Pediatrics Grand Rounds, Chicago, IL, April 2003. "Update in Treatment of Pediatric Epilepsies."
31. International Research Symposium on the Ketogenic Diet and Beta-hydroxybutyrate, in association with Johns Hopkins University and Harvard Medical School, sponsored by Ketocytomyx, Inc., Baltimore, MD, April 2003. "The Ketogenic Diet: Neuroprotection and Anti-epileptogenesis."
32. University of Arizona Health Sciences Center, Department of Neurology Grand Rounds, Tucson, AZ, May 2003. "The Ketogenic Diet: Mechanisms Underlying its Anticonvulsant and Neuroprotective Actions."
33. Oregon Health Sciences University, Department of Neurology Grand Rounds, June 2003. "Infantile Spasms: Mechanistic Insights."
34. Barrow Neurological Institute, Neurology Grand Rounds, August 2003. "Of Ketones and Fatty acids: the Ketogenic Diet Exposed."
35. University of Texas Southwestern Medical Center, Department of Neurology Grand Rounds, October 2003. "Is the Ketogenic Diet Neuroprotective?"
36. Neurology Grand Rounds, Johns Hopkins School of Medicine, November 2003. "Anticonvulsant and Neuroprotective Properties of the Ketogenic Diet: Ketones and Fatty Acids as Mediators."
37. Satellite Symposium, "Catastrophic Epilepsies in Children." American Epilepsy Society Annual Meeting, December 2003. "Basic Science Behind the Catastrophic Epilepsies."
38. Neurology Grand Rounds, Southern Illinois School of Medicine, Springfield, IL, May 2004. "Mechanisms of Ketogenic Diet Action."
39. Pediatric Neurology Grand Rounds, Oregon Health Sciences University, Portland, OR, June 2004. "New Antiepileptic Drug Practice Guidelines: A Critical Appraisal."

40. Pediatric Neurology Grand Rounds, Children's Hospital & Regional Medical Center, University of Washington School of Medicine, Seattle, WA, June 2004. "Update on Antiepileptic Drug Mechanisms."
41. American Academy of Pediatrics, National Conference and Exhibition, San Francisco, CA, October 2004. "Epilepsy Management Update (Seminar)" and "Acute Seizure Management Update (Selected Short Subject)."
42. Child Neurology Society Annual Meeting, Satellite Symposium, Ottawa, Canada, October 2004, Category I CME. "Challenges in Pediatric Epilepsy: Case-Based Discussions."
43. Satellite Symposium, "Status Epilepticus: Evidence and Beyond." American Epilepsy Society Annual Meeting, December 2004, Category I CME. "Status Epilepticus: Perspectives on Neuronal Damage and Neuroprotection."
44. Basic Science Investigators' Workshop, American Epilepsy Society Annual Meeting, December 2004, Category I CME. "Ketone Bodies and Neuronal Excitability."
45. Annual Florida Pediatric Neurology Colloquium, February 2005. "Acute Seizures and Status Epilepticus: Update on Interventional Strategies."
46. Neurology Grand Rounds, University of Washington School of Medicine, March 2005. "Fatty Acid Regulation of Neuronal Excitability." Harborview Medical Center Neuroscience Research Conference, March 2005. "The Effects of Ketone Bodies on Oxidative Stress and Membrane Excitability." Children's Hospital & Regional Medical Center, Seattle, WA, March 2005. "Antiepileptic Drugs and Neuroprotection: What is the Evidence and the Promise?"
47. Neurology Grand Rounds, University of Arizona College of Medicine, March 2005. "Novel Molecular Pathways of Neuroprotection."
48. Neurology Grand Rounds, The Cleveland Clinic, August 2005. "The Mitochondrion as a Target of Ketogenic Diet Action."
49. International Workshop on the Ketogenic Diet: From Molecular Mechanisms to Clinical Effects. Aula Magna Collegio Ghislieri, Pavia, Italy, September 2005. "How Does the Ketogenic Diet Work? A Look into Mechanisms of Action."
50. University of Syracuse, Crouse Hospital, Neurology Grand Rounds, October 2005. "Dietary Approaches Toward Epilepsy Treatment."
51. American Epilepsy Society, Ketogenic Diet Special Interest Group, December 2005. "Fatty Acids and the Ketogenic Diet."

52. Winter Conference on Brain Research (WCBR), Steamboat Springs, CO, January 2006. "Antioxidant Effects of Ketone Bodies."
53. Neurology Grand Rounds, Medical College of Georgia, Augusta, Georgia, March 2006. "Mechanistic Basis of the Ketogenic Diet."
54. Neurology Grand Rounds, University of New Mexico Medical Center, Albuquerque, New Mexico, March 2006. "Dietary Approaches Toward Epilepsy Treatment: Clinical Overview and Scientific Basis."
55. Neurology Grand Rounds, Wayne State University, Detroit, Michigan, March 2006. "Diet and Epilepsy."
56. Neurology Grand Rounds, White Memorial Medical Center, Los Angeles, California, May 2006. "The Role of Newer Anticonvulsants in the Treatment of Epilepsy."
57. Neurology Conference Series, Department of Neurology, University of Southern California School of Medicine, Los Angeles, California, May 2006. "Idiopathic Generalized Epilepsies: Modern Treatment Approaches."
58. Pediatric Neurology Grand Rounds, Department of Pediatrics, UCLA Geffen School of Medicine, Los Angeles, California, May 2006. "Ketone Bodies, Neuronal Excitability and Neuroprotection."
59. Neurology Conference Series, Department of Neurology, Mary Bridge Children's Hospital, Tacoma, Washington, June 2006. "Update on Antiepileptic Drugs."
60. Pediatric Neurology Grand Rounds, Department of Neurology, Texas Children's Hospital, Baylor College of Medicine, Houston, Texas, June 2006. "Dietary Interventions for Medically Refractory Epilepsy."
61. Neuroscience Conference Series, LA County/USC Medical Center, University of Southern California, Los Angeles, California, September 2006. "Initial Monotherapy with Antiepileptic Drugs."
62. 4th Annual Orange County Epilepsy Symposium, Newport Beach, California, October 2006. "Catastrophic Epilepsies of Infancy and Childhood," and "Finding Hope for Intractable Epilepsies." [Keynotes]
63. Oregon Health Sciences University, Department of Neurology Grand Rounds, November 2006. "Diet and Epilepsy: The Mechanistic Links."
64. Neurology Grand Rounds, University of Arizona College of Medicine, May 2007. "Catastrophic Epilepsies of Infancy and Childhood: Current Treatment Options."

65. Neurology Grand Rounds, University of California at Davis, June 2007. "The Human Hypothalamic Hamartoma: A Model of Subcortical Epileptogenesis."
66. Pediatric Grand Rounds, McKnight Brain Institute, University of Florida College of Medicine, Gainesville, September 2007. "Diet and Epilepsy: An Age-Old Connection."
67. Neurology Grand Rounds, University of Texas at Houston Medical Center, October 2007. "Hypothalamic Hamartoma: Mechanisms of Epileptogenesis."
68. 20<sup>th</sup> Annual Epilepsy Update, Baylor College of Medicine, October 2007. "Update on Antiepileptic Drug Use in Children."
69. American Epilepsy Society, Ketogenic Diet Special Interest Group, December 2007. "The Ketogenic Diet is Neuroprotective."
70. American Epilepsy Society, Investigator's Workshop, December 2007. "Ketone Bodies and Neuronal Excitability."
71. Department of Pediatrics, Alberta Children's Hospital, University of Calgary, December 2007. "GABA<sub>A</sub>-receptor Mediated Excitation as a Mechanism of Subcortical Epileptogenesis in Human Hypothalamic Hamartomas."
72. Neurology Grand Rounds, Oregon Health Sciences University, Portland, Oregon, January 2008. "Update on the Genetics of Epilepsy Syndromes."
73. 4th International Workshop on New Horizons in the Development of Antiepileptic Drugs, "Non-traditional Approaches to Treat Epilepsy," Clontarf Castle, Dublin, Ireland, March 2008. "Ketogenic Diet: Neuroprotection, Disease Modification and Mitochondrial Function."
74. Pediatric Neurology Grand Rounds, Children's Hospital Denver, University of Colorado, March 2008. "Novel Mechanisms of Antiepileptic Drugs: Current and Investigational Agents."
75. Neuroscience Grand Rounds, Swedish Hospital Comprehensive Epilepsy Center, Seattle, Washington, May 2008. "Efficacy and Adverse Side-Effects of Antiepileptic Drugs: Insights from Pharmacogenetics and Pharmacogenomics."
76. Pediatric Neurology Grand Rounds, Children's Hospital & Regional Medical Center, University of Washington School of Medicine, Seattle, Washington, May 2008. "Ketogenic Diet, Neuroprotection and Anti-Epileptogenesis."
77. Epilepsy Grand Rounds, Swedish Hospital Comprehensive Epilepsy Center, Seattle, Washington, May 2008. "Mechanistic Insights into Subcortical Epileptogenesis in Surgically-Resected Human Epileptic Tissue."

78. American College of Emergency Physicians (ACEP) Annual Meeting, Chicago, Illinois, October 2008. "Key Facts in the Treatment of Pediatric Seizures."
79. Waisman Center, University of Wisconsin School of Medicine, February 2009. "Metabolic Regulation of Neuronal Excitability."
80. Hotchkiss Brain Institute, University of Calgary, Alberta, Canada, March 2009. "Metabolic Substrates as Potential Anticonvulsant and Neuroprotective Agents."
81. Pediatric Neurology Grand Rounds, Alberta Children's Hospital, University of Calgary, Alberta, Canada, March 2009. "Understanding Why Anticonvulsants Fail: It's Not Always the Drug's Fault!"
82. 10th Asian and Oceanian Congress of Child Neurology (AOCCN), Daegu, South Korea, June 2009. "Future Direction of Ketogenic Diet Based on Animal Research" and "Future Perspectives in Antiepileptic Drug Development."
83. Pediatric Grand Rounds, Alberta Children's Hospital, University of Calgary, Alberta, Canada, September 2009. "Dietary Therapies for Epilepsy: Historical, Scientific and Future Perspectives."
84. National Dietitians' and Nurses' Forum: Dietary Therapies for Epilepsy, Sponsored by The Charlie Foundation (Santa Monica, CA), Scottsdale, AZ, November 2009. "The Ketogenic Diet: Where's the Science?" [Keynote]
85. Canadian League Against Epilepsy Annual Meeting, Kingston, Ontario, October 2010. "Mechanisms of Ketogenic Diet Action."
86. 2<sup>nd</sup> International Symposium on Dietary Therapies for Epilepsy and Other Neurological Disorders, Edinburgh, Scotland, October 2010. "What Can Science Teach Us" and "Scientific Basis of Dietary Therapies".
87. American Epilepsy Society Annual Meeting, Antiepileptic Therapy (AET) Symposium, San Antonio, Texas, December 2010. "GABA-induced Depolarization: A Tale of Opposing Forces."
88. Canadian Neurological Sciences Federation, Canadian Association of Child Neurologists, Annual Meeting, Vancouver, BC, June 2011. "Metabolic Substrates and Targets: A Paradigm Shift in Antiepileptic Drug Development."
89. XIth Workshop on the Neurobiology of Epilepsy (WONOEP) 2011, "Finding a Better Drug for Epilepsy," Villa Grazioli, Rome, Italy, August 2011. "Novel Molecular Targets for Anti-epileptogenesis".



90. 29<sup>th</sup> International Epilepsy Congress, Rome, Italy, August 2011. Neurobiology of Epilepsy Workshop: Metabolic Mechanisms of Epileptogenesis. "The Ketogenic Diet and Epilepsy", "Synthesis of WONOEP 2011 Discussions on Novel Targets for Anti-epileptogenesis".
91. American Epilepsy Society Annual Meeting, Investigator's Workshop on Modulation of Metabolic Pathways to Prevent Seizures and Epileptogenesis, Baltimore, MD, December 2011. "Control of Neuronal Excitability by Ketone Bodies."
92. University of British Columbia, BC Children's Hospital, Neurosciences Rounds, February 2012. "Mechanisms of Ketone-Mediated Neuroprotection in Epileptic Brain."
93. Toronto Western General Hospital Grand Rounds, University of Toronto, April 2012. "Dietary Manipulations in Experimental and Clinical Epilepsy: Lessons Learned and Future Directions."
94. Neurology Grand Rounds, Hospital for SickKids, University of Toronto, Toronto, Ontario, Canada, April 2012. "Metabolic Mechanisms of Functional Neuroprotection in Epileptic Brain."
95. Neurology/Epilepsy Grand Rounds, Montreal Children's Hospital, Montreal, Quebec, Canada, May 2012. "Newer and Investigational Antiepileptic Drugs."
96. Loma Linda University Continuing Medical Education Conference, Hayden Lake, Idaho, August 2012. "Approach to Clinical Neuropharmacology Simplified," "Seizures, Epilepsy, and Autism – Emerging Links," "What to Take for Headaches and Migraine," "Altered Mental Status: When is it Serious?," "Sleep Difficulties: A Silent Epidemic."
97. 3<sup>rd</sup> International Symposium on Dietary Therapies for Epilepsy and Other Neurological Disorders, Indian Lakes, Chicago, September 2012. "Advancing Dietary Therapies: Challenges and Opportunities" and Panel Moderation for Basic Science Platform Session.
98. National Institutes of Health, National Institute of Neurological Disorders and Stroke, Curing the Epilepsies 2013: Pathways Forward, Bethesda, Maryland, April 2013. "Ketogenic Diet: Enhancing Efficacy and Extending Clinical Applicability."
99. University of California at Davis Special Conference, Issues in Clinical Epileptology: A View From the Bench, Watsonville, California, May 2013. "Animal Models of Epilepsy: Pitfalls, Promise and Advancing Innovation."
100. 30<sup>th</sup> International Epilepsy Congress, Montreal, Quebec, June 2013. "Ketogenic Diet Symposium: How does the diet work?" and "Treating the Tough Epilepsies: Is There an Optimum Ketogenic Diet?"
101. American Epilepsy Society Meeting, Washington DC, December 2013. "Mechanisms Underlying Seizure Genesis in Pediatric Brain Tumors."

102. 13<sup>th</sup> Annual Neuroscience Day, Peter Gilgan Centre for Research and Learning, Hospital for Sick Children, University of Toronto, October 2014. "Dietary Therapies for Neurological Disorders: Epilepsy, Autism and Brain Cancer." [Keynote]
103. Toronto Western General Hospital, Epilepsy Unit, University of Toronto, Ontario, Canada, October 2014. "Medical Treatments for Lennox-Gastaut Syndrome."
104. Canadian Association of Paediatric Health Centres, Annual Conference, "Climbing Mountains: Leadership & Resilience in Paediatric Healthcare," Calgary, Alberta, October 2014. "The Developing Brain: Is Nature to Resilience as Nurture is to Leadership?" [Keynote]
105. 4<sup>th</sup> International Symposium on Dietary Therapies for Epilepsy and Other Neurological Disorders, Liverpool, United Kingdom, October 2014. "Does Aetiology Tell Us Something About Action," "Beyond Epilepsy – Where From Now?," and Panel Moderation for Basic Science Platform Sessions.
106. American Epilepsy Society Meeting, Investigators Workshop, Seattle, WA, December 2014. "Neurometabolic Effects of Status Epilepticus."
107. British Neuroscience Association, Festival of Neuroscience 2015, Edinburgh, Scotland, UK, April 2015. "Diet-Induced Ketosis in Regulating Brain Function."
108. National Institutes of Health Antiepileptic Drug Development Program Symposium: Therapy Development in the Era of Team Science and Big Data, Salt Lake City, Utah, May 17-20, 2015. "Bioenergetic Substrates: More Than Just Cellular Fuels."
109. 47<sup>th</sup> European Metabolic Group Conference: How Early Diagnosis Influences Treatment Strategies, Venice, Italy, June 11-13, 2015. "The Ketogenic Diet: An Interventional Strategy Aimed at Neuroprotection."
110. 4<sup>th</sup> World Korean Medical Organization Annual Convention, Los Angeles, California, July 2-4, 2015. "Diet and Brain Function."
111. 17<sup>th</sup> International Symposium on Benign Infantile Seizures (ISBIS), Tokyo, Japan, September 25-26, 2015. "A Translational Talk on Benign Infantile Seizures."
112. UCB Epilepsy Summit and Infantile Spasms Workshop, Braine-l'Alleud, Belgium, September 30-October 2, 2015. "Ketogenic Diet in a Pill: Is This Possible" and "NMDA and NR2B Biology in Epilepsy: Relevance to Infantile Spasms."
113. Genentech Research Seminar, South San Francisco, California, November 13, 2015. "Targeting Bioenergetics for Neuroprotection and Disease Modification."

114. Nutricia, North America, Learning Center, Webinar (<http://www.nutricialearningcenter.com>), December 17, 2015. "Mechanism of Action of the Ketogenic Diet."
115. 1<sup>st</sup> Annual International Conference on Nutritional Ketosis and Metabolic Therapies, University of South Florida, Tampa, Florida, January 29, 2016. "Ketogenic Diet as a Therapy for Diverse Neurological Disorders."
116. 6<sup>th</sup> Biennial Genetic Metabolic Dietitians International Conference, Scottsdale, Arizona, April 28-30, 2016. "Mechanisms of Ketogenic Diet: Current Research". [Keynote]
117. 51<sup>st</sup> Canadian Neurological Sciences Federation Congress, Quebec City, Quebec, Canada, June 22, 2016. "Tumour-Related Epilepsy: Basic Mechanisms Underlying Epileptogenicity".
118. 5<sup>th</sup> Global Symposium on Ketogenic Therapies: Treating Epilepsy, Brain Cancer, Autism and Cognitive Disorders, Banff, Alberta, Canada, September 20-24, 2016. "Ketogenic Therapies for Neurological Disorders: The Next Generation". [Keynote]
119. 2<sup>nd</sup> International Symposium Immunity and Inflammation in Epilepsy, Mario Negri Institute, Milan, Italy, October 12-14, 2016. "Anti-inflammatory Aspects of the Ketogenic Diet and Polyunsaturated Fatty Acids".
120. Pediatric Nutrition and Metabolic Society of Turkey Conference, February 25, 2017. "Ketogenic Diet in Neurologic and Metabolic Diseases from a Clinician's Perspective". [Keynote]
121. Spring Summit on Ketogenic Diet Therapies, March 11-12, 2017, Scottsdale Arizona, "Applications of the Ketogenic Diet Beyond Epilepsy," and 21<sup>st</sup> Annual Children's Neuroscience Symposium, Barrow Neurological Institute at Phoenix Children's Hospital, March 13-14, 2017, Keynote Address, "Neuroprotective Effects of the Ketogenic Diet". [Keynotes]
122. 11<sup>th</sup> Annual Pediatric Neurology Update, University of Tennessee Health Science Center, Memphis, TN, April 7-8, 2017. Kayden R. Vinson Distinguished Scholar Award and Lecture, "Mechanisms of Anti-Seizure Drug Action: Does Knowing These Matter?" and "A Mechanistic Approach to Helping Your Patient with Headaches". [Keynotes]
123. Danone Nutricia Research Experts Meeting, Utrecht, Netherlands, July 3-4, 2017. "Molecular Mechanisms of Action of the Ketogenic Diet and New Scientific Concepts for Improving Epilepsy Treatment".
124. Ajinomoto Healthcare National Meeting, San Diego, California, August 28, 2017. "Rationale for Use of the Ketogenic Diet in Medical Foods".
125. Department of Neurosciences Grand Rounds, University of California at San Diego, September 22, 2017. "Metabolism-Based Treatments for Neurological Disorders: Lessons from the Study of Ketogenic Diets".

126. Department of Neuroscience Grand Rounds, University of Kentucky at Lexington, KY, October 2, 2017. "Autism Spectrum Disorder: Translational Perspectives on Pathophysiological Mechanisms and Therapeutic Options".
127. 40<sup>th</sup> Anniversary Meeting of the Canadian League Against Epilepsy, Vancouver, British Columbia, October 13-15, 2017. "Mechanistic Overview of Anti-Seizure Drugs" and "Pharmacokinetic Profiles of Newer Anti-Seizure Drugs".
128. James S. McDonnell Foundation Research Workshop, "Food for Thought: The Ketogenic Diet and Neurological Disorders", Tarrytown, New York, November 2-4, 2017. "Learning from Failures: When Ketogenic Diets are Ineffective".
129. 51<sup>st</sup> Meeting for the Winter Conference on Brain Research, "Harnessing Metabolic Systems to Treat Epilepsy: Ketone Bodies as Anti-Seizure Agents," Whistler, British Columbia (Canada), January 14-19, 2018.
130. 2018 International Society of Gastronomy Annual Conference, "Ketogenic Diets in Different Flavors: Do They Promote Brain Health?" University of Kentucky, Lexington, Kentucky. March 2-3, 2018.
131. Creighton University Distinguished Lecture Series, "The Ketogenic Diet: Past, Present and Future Clinical Uses and Neuroprotective Mechanisms Underlying Expanding Applications," Creighton University Health Sciences Center, Omaha, Nebraska. April 25, 2018.
132. 41<sup>st</sup> Anniversary Meeting of the Canadian League Against Epilepsy, St. John's, Newfoundland, Canada, September 21-23, 2018. "Mechanism of Action of the Ketogenic Diet: Is This Still a Mystery".
133. 6<sup>th</sup> Global Symposium on Ketogenic Therapies for Neurological Disorders, Jeju, South Korea, October 5-8, 2018. "Overview of Mechanisms of the Ketogenic Diet" (Pre-Congress Workshop, Practical Implementation of Ketogenic Therapy), "History of Ketogenic Diet Symposia", "Basic Mechanisms of Ketogenic Diet Action" (Keynote Lecture, Main Session), and "What is the Impact of the Microbiome on Brain Cellular Metabolism?"
134. 52<sup>nd</sup> Congress of the Japan Epilepsy Society, Yokohama, Japan, October 24-28, 2018. "Neurometabolic Treatments for Epilepsy: Scientific Basis and Clinical Evidence" (Keynote Lecture).
135. UNLIKE Minds Summit, Emerald Lake, Field, British Columbia, November 21-24, 2018. "Gut Microbiome and Neurological Disorders".

136. American Epilepsy Society Annual Meeting, Pediatric State-of-the-Art Symposium, New Orleans, Louisiana, December 1, 2018. “Ketogenic and Metabolism-Based Therapies for Epilepsy: Summary of Progress and Future Directions”.
137. University of California at Irvine, EpiCenter Seminar Series, January 7, 2019. “Targeting Mitochondria for Seizure Control”.
138. 3<sup>rd</sup> Annual Metabolic Health Summit, Long Beach, California, January 31 through February 3, 2019. “Ketogenic Diet for Autism Spectrum Disorder: Evidence for Mitigating Core Symptoms”.
139. 2<sup>nd</sup> Annual Banff International Epilepsy Symposium, “Epilepsy Across the Lifespan”, Banff, Alberta, Canada, February 15, 2019. “Basic Science of Dietary Therapies for Epilepsy”.
140. 4<sup>th</sup> Annual International Society of Neurogastronomy Conference, New Orleans, Louisiana, June 20, 2019. “Ketogenic Diets and Neurogastronomic Implications”.
141. Society for the Study of Inborn Errors of Metabolism, Annual International Congress, Rotterdam, Netherlands, September 2-6, 2019. “UPDATE LECTURE: Working Mechanisms of Ketogenic Diets”.
142. Dutch Neurological Society Meeting, and Ketogenic Diet Interest Group, Rotterdam, Netherlands, September 4, 2019. “Ketogenic Diet and the Gut Microbiome,” and “The Mode(s) of Action of the Ketogenic Diet”.
143. 4<sup>th</sup> Annual Metabolic Health Summit, Long Beach, California, January 30 – February 2, 2020. “Diet and the Brain: Is There a Bona Fide Scientific Connection?”.
144. Keto University Global Webinar (Nutricia North America), July 13, 2020. “Ketone Bodies in Health and Disease: The Underlying Science and Potential Therapeutic Applications.”
145. 1<sup>st</sup> North American Epilepsy Congress, Toronto, Canada, September 24-27, 2020. “Metabolism- and Diet-Based Treatments for Epilepsy: Current Evidence and Controversies – Alterations in Gut Microbiota.”
146. 38<sup>th</sup> Brazilian Congress of Epilepsy, On-Line (<https://epilepsia2020.com.br/>), October 23-24, 2020. “The Ketogenic Diet as a Treatment Option for Pharmaco-Resistant Epilepsy.”
147. Metabolism-Based Therapies for Epilepsy, National Institutes of Health (NINDS) Workshop, November 9-10, 2020. “Biomarkers of Ketogenic Diet Action.”
148. 7<sup>th</sup> Global Symposium on Medical Ketogenic Dietary Therapies, Collaborative Science and Clinical Care, November 2020, Webinar: “Mechanisms of Action: Have We Moved On?”. [www.globalketo.com](http://www.globalketo.com).

149. American Epilepsy Society Meeting, Seattle, Washington, December 2020. Investigators' Workshop: Metabolism-Targeted Treatments for Epilepsy Revealed Through Studies of Ketogenic Diet Mechanisms, "Mitochondrial Targets of Ketone Body Action."
150. 12<sup>th</sup> International Arab Neonatal Care Conference, Pre-Conference Virtual Satellite Workshop on Neonatal Neuro-Critical Care Pearls: Ketogenic Diet and the Young Brain, Newborn Brain Society (NBS) and Arab Neonatal Care Group (ANCG), June 5, 2021. "Protecting the Neonatal Brain: The Promise of Metabolism-Based Approaches."
151. 62<sup>nd</sup> Annual Conference of the American Society of Electrodiagnostic Technicians (ASET), The Neurodiagnostic Society, San Diego, California, August 2021. "Neurophysiology of Seizures and Epilepsy."
152. 34<sup>th</sup> International Epilepsy Congress, International League Against Epilepsy, Virtual Congress, September 1, 2021. Interactive Session "The Ketogenic Diet: Highlights for the Centennial Following Its Birth," "The Gut Microbiome and Epilepsy."
153. 7<sup>th</sup> Global Symposium on Medical Ketogenic Dietary Therapies, Collaborative Science and Clinical Care, October 19<sup>th</sup>-22<sup>nd</sup>, 2021, Brighton, United Kingdom. "History of the Ketogenic Therapies Global Symposia and Introduction to the International Neurological Ketogenic Society," "Ketogenic Therapies: The Next Century," and "Metabolism and Epigenetics-Based Paradigms for Anti-Seizure Drug Discovery: How Does This Move Us Forward?"
154. Johns Hopkins University, Department of Neurology, Metabolism in Neurologic Diseases (MIND) Lecture Series, "Ketogenic Diet, Gut Microbiome and Metabolomics" and "Introduction to the International Neurological Ketogenic Society", November 29, 2021.
155. Indian Epilepsy Society and Dr. Reddy's Laboratories, Medisage e-Learning Pvt Ltd, Mumbai, India, Webinar and Roundtable Discussion, "Anti-Seizure Medications and the Gut Microbiome: A Link for Pharmaco-Resistance?", April 24, 2022.
156. 5<sup>th</sup> Annual Metabolic Health Summit, Santa Barbara, California, May 5 – 8, 2022. Keynote Lecture: "Metabolic Health and Wellness: History, Scientific Foundations and Transforming the Future".
157. 2<sup>nd</sup> Annual GLUT1 (Glucose Transporter 1)-Deficiency Foundation Scientific Conference, San Diego, California. "Ketogenic Diets: History, Clinical Implementation, Scientific Foundations, and Therapeutic Spectrum", July 11-13, 2022. Family presentation July 13-15, 2022.

#### LOCAL/REGIONAL

1. Pediatric Grand Rounds, Huntington Memorial Hospital, Pasadena, California. December 1991. "Pediatric Epilepsy Surgery.

2. Pediatric Grand Rounds, UCLA Medical Center, June 1992. "Headaches and Migraine in Children."
3. 2nd Annual Spring Electroneurodiagnostic Symposium, Capital Region Electroneurodiagnostic Society of Technologists (CREST), Washington, D.C., April 1993. "Survey of Pediatric Epilepsy: Clinical and Electroencephalographic Features."
4. Clinical Neurophysiology Conference, Departments of Neurology and Pediatrics, UCLA School of Medicine, July 1994. "Mechanisms of Action of the Dicarbamate Compounds Felbamate and Meprobamate."
5. Neurosurgery Grand Rounds, Department of Neurological Surgery, University of Washington School of Medicine, March 1995. "Felbamate, Gabapentin, Lamotrigine and Vigabatrin: The Four Horsemen of Antiepileptic Drug Therapy?"
6. Pediatric Grand Rounds, University of Washington School of Medicine, September 1995. "Guillain-Barré Syndrome."
7. Pediatric Neurology Grand Rounds, Department of Pediatrics, UCLA Medical Center, April 1996. "Modulation of GABA<sub>A</sub> Receptors by Anticonvulsants."
8. Providence Hospital, Anchorage, AK, May 1996. "Introduction to Pediatric and Neonatal EEG"; "Medical Management of Intractable Epilepsies"; and "Status Epilepticus and the Role of Fosphenytoin".
9. Pediatric Grand Rounds, Children's Hospital & Regional Medical Center, Seattle, WA, August 1996. "Recent Advances in Anticonvulsant Drug Therapy."
10. Practical Pediatrics Annual Course, Workshop on "Afebrile Seizures: Diagnosis and Management," Category I CME. Children's Hospital & Regional Medical Center, Seattle, WA, October 1996.
11. Strategy of Epilepsy Treatment, Department of Neurology, Oregon Health Sciences University, April 18, 1998, "Developmental Principles of Antiepileptic Drug Therapy."
12. MultiCare CME & Mary Bridge Children's Hospital & Health Center 24th Annual Day of Pediatrics ("Challenges in Office-Based Pediatric and Adolescent Care"; Category I CME), Tacoma, Washington, September 1998, "Childhood Migraine."
13. Practical Pediatrics Annual Course, Workshop on "Headache and Migraine: Case Studies," Category I CME. Children's Hospital & Regional Medical Center, Seattle, WA, October 1998.

14. University of Washington School of Medicine, Continuing Nursing Education, "Pharmacotherapy of Headache and Migraine," Shoreline Conference Center, Shoreline, WA, March 1999.
15. Update in Child Neurology & Psychiatry Course, "Mechanisms Underlying the Actions of Anticonvulsant and Psychotropic Drugs," Children's Hospital & Regional Medical Center, Seattle, WA, May 1999.
16. Common Questions About Epilepsy, University of Washington Continuing Medical Education, Museum of History and Industry, Seattle, WA, October 1999. "When is the Ketogenic Diet Useful?"
17. Invited Lecture Series, Skagit Valley Hospital, Mt. Vernon, WA, October 1999. "Update on the Treatment of Epilepsy," and "Headache and Migraine: Recognition and Management."
18. Pediatric Grand Rounds, Children's Hospital & Regional Medical Center, Seattle, WA, January 2000. "Progress in Our Understanding and Treatment of Febrile Seizures."
19. Neurology Grand Rounds, University of Washington School of Medicine, Seattle, WA, February 2000. "GABA: Neurochemistry and Neuropharmacology."
20. Pediatric Drug Therapy, University of Washington School of Nursing, Seattle, WA, March 2000. "Update on Pediatric Seizure Medications."
21. "Insights into Pediatric Epilepsies and their Treatments," April 2000. Pediatric Epilepsy Public Forum, University of Washington Center for Urban Horticulture, Seattle, WA.
22. "Developmental Principles of Antiepileptic Drug Therapy," May 2000. Children's Hospital & Regional Medical Center, Seattle, WA.
23. Pediatric Grand Rounds, UC Irvine Medical Center, Orange, CA, November 2000. "Infant Botulism and Neonatal Tetanus: Fear and Loathing at the Neuromuscular Junction."
24. Neurology Grand Rounds, UC Irvine Medical Center, Orange, CA, December 2000. "Mechanisms of Epileptogenesis."
25. Orange County Neurological Society Monthly Presentation, Irvine, CA, December 2000. "Epilepsy Treatment: When the First Drug Fails..."
26. Neurology Grand Rounds, UC Irvine Medical Center, Orange, CA, January 2000. "Neuropharmacological Modulation of the Brain GABA System."
27. "Update on the Pharmacological Treatment of Intractable Epilepsy," Tri-Cities Neurologists, Kennewick, WA, February 2001.



28. "Update on Pediatric Seizure Medications," Downey Regional Medical Center, Category I CME, Downey, CA, March 2001.
29. "Update on the Pathophysiology and Treatment of Non-febrile Seizures in Children," American Academy of Pediatrics, California Chapter 4 Quarterly Meeting, Orange, CA, March 2001.
30. Pediatric Grand Rounds, UC Irvine Medical Center, Orange, CA, March 2001. "The Ketogenic Diet in the Treatment of Epilepsy."
31. 2nd Annual van den Noort Conference, Clinical Neuroscience 2001, "Epilepsy Mini-Symposium: Pediatric Epilepsy Update." Category I CME, Beckman Conference Center, Irvine, CA, March 2001.
32. "A Rational Approach Toward AED Choices," Neurologists Presentation, St. Joseph's Hospital and Barrow Neurological Group, Phoenix, AZ, April 2001.
33. Fairview Developmental Center, Costa Mesa, CA, May 2001. "The Pharmacological Treatment of Epilepsy: Strategies and Limitations."
34. Pediatric Grand Rounds, UC Irvine Medical Center, Orange, CA, August 2001. Category I CME. "Migraine Variants and Equivalents."
35. Neuroscience Grand Rounds, Loma Linda University School of Medicine, "Pharmacologic Basis of Antiepileptic Drug Action." Category I CME, Loma Linda University Medical Center, Loma Linda, CA, September 2001.
36. Fairview Developmental Center, Costa Mesa, CA, September 2001. "Epilepsy Case Studies: Current Management Options."
37. Department of Psychiatry Grand Rounds, UC Irvine Medical Center, Orange, CA, October 2001. Category I CME. "Broad-Spectrum Anticonvulsants: Mechanisms Underlying Their Clinical Efficacy in Neurobehavioral Disorders."
38. Neurology Grand Rounds, University of Southern California School of Medicine, Los Angeles, CA, October 2001. "Neuroprotective Actions of Antiepileptic Drugs."
39. Neurology Grand Rounds, UC Irvine Medical Center, Orange, CA, October 2001. "Antiepileptic Drugs and Epileptogenesis."
40. Neurology Grand Rounds, Brain Mapping and Epilepsy Program, Huntington Memorial Hospital, Pasadena, CA, April 2002. Category I CME. "The Ketogenic Diet: A Mechanistic Update."
41. Universal Care Pediatrics Group (UCI Speakers Bureau), Orange County, CA, April 2002. "Childhood Migraine: Update on Pathophysiology and Treatment."

42. Pediatric Grand Rounds, Miller Children's Hospital, Long Beach, CA, May 2002. Category I CME. "Channelopathies of the Nervous System."
43. Pediatric Grand Rounds, Children's Hospital of San Diego and University of California at San Diego, San Diego, CA, June 2002. Category I CME. "Update on Childhood Seizure Management."
44. Pediatric Grand Rounds, Children's Hospital of Orange County, Mission Viejo, CA, June 2002. Category I CME. "New Developments in the Treatment of Pediatric Epilepsy."
45. Roundtable Presentation, Orange County Neonatology Group, and California Chapter IV of the American Academy of Pediatrics, Newport Beach, CA, July 2002. "Neuroprotective Strategies for Neonatal Hypoxia-Ischemia."
46. Neurology Grand Rounds, UC Irvine Medical Center, Orange, CA, July 2002. "Mechanisms Underlying the Anticonvulsant Efficacy of the Ketogenic Diet."
47. 29<sup>th</sup> Annual Kaiser Permanente Neurology Symposium, Laguna Beach, CA, August 2002. Category I CME. "Update on New Anticonvulsants with Focus on the Pediatric Age Group."
48. Pediatric Grand Rounds, UC Irvine Medical Center, Orange, CA, September 2002. Category I CME. "Childhood Ataxia: Clinical Spectrum and Molecular Pathogenesis."
49. Los Angeles Neurological Society Monthly Meeting, Los Angeles, CA, February 2003. Category I CME. "AEDs and Neuroprotection: Clinical Implications and Clinical Study Design Issues."
50. Psychiatry Grand Rounds, UC Irvine Medical Center, Orange, CA, March 2003. "Antiepileptic Drugs: Their Impact on Cognition and Sleep."
51. EpiCenter Research Symposium, UC Irvine College of Medicine, Irvine, CA, March 2003. "The Ketogenic Diet Enhances Mitochondrial Uncoupling Protein Activity."
52. Cedars-Sinai Medical Center, Los Angeles, CA, June 2003. Division of Child Neurology Conference. "Mechanisms Underlying the Neuroprotective Effects of the Ketogenic Diet."
53. Pediatric Grand Rounds, Los Angeles Children's Hospital, University of Southern California, Los Angeles, CA, September 2003. "The Central Role of Ketone Bodies and Fatty Acids in the Clinical Effects of the Ketogenic Diet."
54. Department of Orthopedic Surgery Grand Rounds, UC Irvine Medical Center, Orange, CA, September 2003. "Anticonvulsant Mechanisms Relevant to Neuropathic Pain."

55. Fairview Developmental Center, Costa Mesa, CA, September 2003. "Comparative Mechanisms of Action of Antiepileptic Drugs."
56. Pediatric Neurology Conference, Children's Hospital of San Diego and University of California at San Diego, San Diego, CA, October 2003. "Antiepileptic Drugs: Mechanistic Update and Evolving Clinical Assessment."
57. Neurology Grand Rounds, UC Irvine Medical Center, Orange, CA, October 2003. "Pathophysiological Mechanisms Underlying Infantile Spasms."
58. First California Pediatric Neurology Colloquium, Cedars-Sinai Medical Center, Los Angeles, CA, November 2003, Category I CME. "Comparative Update on New Antiepileptic Drugs."
59. Radiology Grand Rounds, UC Irvine College of Medicine, Orange, CA, December 2003, Category I CME. "Neuroimaging of Epilepsy."
60. Neurology Grand Rounds, UCLA-Harbor Medical Center, Torrance, CA, May 2004, Category I CME. "Diet and Epilepsy."
61. Neurology Grand Rounds, University of Southern California School of Medicine, Los Angeles, CA, May 2004. "Ketogenic Diet: Anticonvulsant Mechanisms and Neuroprotective Potential."
62. Pediatric Neuroscience Grand Rounds, Barrow Neurological Institute, Phoenix, AZ, August 2004. "Update on Mechanisms of Action of Antiepileptic Drugs."
63. 9th Annual Pediatric Neurosciences Symposium, Barrow Neurological Institute, Phoenix, AZ, October 2004, Category I CME. "Evaluation of Nocturnal Spells in Children."
64. 17th Annual Epilepsy Symposium, Barrow Neurological Institute, Phoenix, AZ, November 2004, Category I CME. "The Ketogenic Diet: Why it Works and When to Try It."
65. Epilepsy Research Conference, Barrow Neurological Institute, Phoenix, AZ, January 2005. "Mitochondria as Targets of Ketogenic Diet Action."
66. Pediatric Neurology Colloquium, Phoenix, AZ, February 2005. "Principles of Developmental Pharmacokinetics."
67. Barrow Neuroscience Seminar Series, Phoenix, AZ, February 2005. "Novel Molecular Targets of Antiepileptic Drugs."
68. 31st Annual Barrow Symposium, Phoenix, AZ, March 2005. "Diagnosis of Paroxysmal Disorders in Infancy and Childhood."
69. Barrow Neuroscience Seminar Series, Phoenix, AZ, April 2005. "GABA: 55 Years and Counting."

70. Annual EEG Technologists Epilepsy Forum, Barrow Neurological Institute, Phoenix, AZ, May 2005. "Neurophysiology of Epilepsy" and "Acute Seizures and Status Epilepticus."
71. Neurology Grand Rounds, Barrow Neurological Institute, Phoenix, AZ, August 2005. "Mitochondrial Uncoupling Proteins in Health and Disease."
72. 10th Annual Pediatric Neurosciences Symposium, Barrow Neurological Institute, Phoenix, AZ, October 2004, Category I CME. "Medical Management: Judging the Efficacy and Tolerability of Your Antiepileptic Drug" and infantile spasms case presentation.
73. Pediatric Grand Rounds, St. Joseph's Hospital & Medical Center, Barrow Neurological Institute, November 2005. "Dietary Approaches Toward Epilepsy Treatment."
74. Pediatric Neuroscience Grand Rounds, Barrow Neurological Institute, Phoenix, AZ, July 2006. "Infantile Spasms: A Comprehensive Review."
75. 19th Annual Mayo Clinic Epilepsy Symposium, Scottsdale, AZ, November 2006. "Older Antiepileptic Drugs: Overview and Debate."
76. Pediatric Neuroscience Grand Rounds, Barrow Neurological Institute, Phoenix, AZ, May 2007. "The Genetics of Epilepsy Syndromes."
77. Pediatric Neuroscience Grand Rounds, Barrow Neurological Institute, Phoenix, AZ, August 2007. "Pharmacology of Anti-epileptic Drugs."
78. Barrow Neuroscience Seminar Series, Phoenix, AZ, September 2007. "Ketone Bodies and Neuroprotection."
79. 20<sup>th</sup> Annual Epilepsy Update, Barrow Neurological Institute, Phoenix, AZ, November 2007. "Adverse Effects of Antiepileptic Drugs: Are You Susceptible?"
80. Second Annual Joint Arizona State University-Barrow Neurological Institute Neuroscience Symposium, Tempe, AZ, February 2008. "The Hypothalamic Hamartoma: A Human Model of Subcortical Epileptogenesis."
81. 34th Annual Barrow Neurological Institute Symposium, Phoenix, AZ, February 2008. "The Science of Epilepsy."
82. Neurology Grand Rounds, Barrow Neurological Institute, Phoenix, AZ, July 2008. "Why Do Drugs Fail? Lessons From Our Experience With Antiepileptic Drugs."
83. Pediatric Neuroscience Grand Rounds, Barrow Neurological Institute, Phoenix, AZ, August 2008. "Status Epilepticus: Diagnosis and Management."

84. Children's Health Center, St. Joseph's Hospital & Medical Center, Phoenix, AZ, September 2008. "Pediatric Stroke."
85. Departmental Seminar, Midwestern University Department of Physiology, Phoenix, AZ, April 2009. "Metabolism and Epilepsy: Identifying Novel Targets for Intervention."
86. Epilepsy Research Seminar, Barrow Neurological Institute, St. Joseph's Hospital & Medical Center, Phoenix, AZ, May 2009. "The Emerging Link Between Metabolism and Epileptogenesis."
87. Neurology Grand Rounds, Barrow Neurological Institute, Phoenix, AZ, August 2009. "Antiepileptic Drugs of the Future: Novel Mechanisms & Clinical Uses."
88. Neurology Grand Rounds, University of Arizona College of Medicine, Tucson, AZ, September 2009. "Regulation of Neuronal Excitability by Metabolic Substrates."
89. Pediatric Neuroscience Grand Rounds, Barrow Neurological Institute, Phoenix, AZ, September 2009. "Pediatric Stroke."
90. 14th Annual Barrow Pediatric Neurosciences Symposium, Phoenix, AZ, October 2009. "Research in Pediatric Neuroscience: What's Going On, What It Means" and "New Drug Development for Epilepsy Treatment."
91. Pediatric Neurology Noon Conference, Mattel Children's Hospital, David Geffen School of Medicine at UCLA, November 2009. "Medical Treatments for Lennox-Gastaut Syndrome."
92. Pediatric Neuroscience Grand Rounds, Barrow Neurological Institute, Phoenix, AZ, March 2010. "Infantile Spasms: A Pharmacological Update."
93. Neurology Grand Rounds, Barrow Neurological Institute, Phoenix, AZ, July 2010. "Metabolism and Diet: A Paradigm for Neuroprotection."
94. Division of Pediatric Neurology, Rady Children's Hospital & Medical Center, San Diego, CA, July 2010. "Medical Treatments for Lennox-Gastaut Syndrome."
95. Pediatric Neurology Conference, Alberta Children's Hospital, Calgary, AB, November 2010. "Preclinical and Clinical Pharmacology of the Novel Anticonvulsant Lacosamide."
96. Grand Rounds, Department of Clinical Neurosciences, Foothills Medical Centre, University of Calgary, Alberta, Canada, January 2011. "The Ketogenic Diet and Neuroprotection."
97. Grand Rounds, Department of Pediatrics, Alberta Children's Hospital, University of Calgary, Alberta, Canada, March 2011. "Update on Migraine Variants and Equivalents."

98. Hotchkiss Brain Institute, University of Calgary, 7<sup>th</sup> Annual Research Day, Calgary, Alberta, Canada, May 2011. "Neurometabolism as a Treatment Paradigm for Neurological Disorders."
99. Developmental Neurosciences Grand Rounds, Alberta Children's Hospital, University of Calgary, Alberta, Canada, September 2011. "Infantile Spasms: Mechanisms and Models".
100. Department of Clinical Neurosciences, University of Calgary, Academic Half-Day Presentation, October 2011. "Stupor and Coma".
101. Department of Pediatrics, Division of Pediatric Neurology Academic Half-Day Presentation, October 2011. "Practical Aspects of Ketogenic Diet Implementation and Surveillance."
102. Developmental Neurosciences Grand Rounds, Alberta Children's Hospital, University of Calgary, Alberta, Canada, October 2011. "Genetics of Epilepsy: An Update".
103. Epilepsy Conference, Alberta Children's Hospital, October 2011. "Rufinamide: Preclinical and Clinical Pharmacology".
104. Epilepsy Conference, Alberta Children's Hospital, October 2011. "Intravenous Lacosamide: Pharmacokinetics, Clinical Efficacy and Potential Use in Refractory Status Epilepticus".
105. Epilepsy Conference, Alberta Children's Hospital, October 2011. "Key Seizure Facts and Approaches: Status Epilepticus and Febrile Seizures."
106. Alberta Children's Hospital Research Institute, Pediatric Oncology Research Day, Calgary, Alberta, Canada, November 2011. "The Ketogenic Diet as an Adjuvant Treatment for Brain Cancer".
107. Department of Clinical Neurosciences, University of Calgary, Retreat, November 2011. "A Vision for Child Neurology and Developmental Neurosciences at the Alberta Children's Hospital and the University of Calgary."
108. University of Calgary, Medical Sciences Course 751.09, Ion Channel Diseases, January 2012. "Basic Neurophysiology of Epilepsy and Mechanisms of Antiepileptic Drug Action."
109. Division of Pediatric Neurology, Academic Half-Day Presentation, February 2012. "The Autonomic Nervous System: A Comprehensive Review."
110. Division of Pediatric Neurology Symposium on Neonatal Neurology, February 2012. "Principles of Neonatal Neuropharmacology: Pharmacokinetics and Target Mechanisms."
111. Developmental Neurosciences Grand Rounds, Alberta Children's Hospital, University of Calgary, Alberta, Canada, July 2012. "Modulation of Neuronal Activity – The Roles of Receptors, Ion Channels and Transporters."

112. Paediatric Grand Rounds, Alberta Children's Hospital, University of Calgary Faculty of Medicine, September 2012. "Idiopathic Intracranial Hypertension."
113. Grand Rounds, Glenrose Rehabilitation Hospital, University of Alberta (Edmonton), December 2012. "Lennox-Gastaut Syndrome."
114. Children's Comprehensive Epilepsy Center Rounds, Alberta Children's Hospital, University of Calgary, October 2012. "Discontinuing Anti-epileptic Drugs."
115. Neuroscience Grand Rounds, University of Alberta (Edmonton), December 2012. "Rational Polypharmacy with Anti-epileptic Drugs."
116. Department of Medical Genetics Didactic Conferences, University of Calgary, October 2012. "Ion Channelopathies of the Nervous System" and "Genetics of Epilepsy".
117. Department of Medical Genetics Grand Rounds, University of Calgary, December 2012. "Ketogenic Diet as a Treatment Paradigm for Diverse Neurological Disorders."
118. Paediatric Neurology Didactic Conference, Alberta Children's Hospital, University of Calgary, November 2012. "Neuroimaging of Infantile Spasms."
119. Paediatric Neurology Didactic Conference, Alberta Children's Hospital, University of Calgary, November 2012. "Hepatic Encephalopathy."
120. Paediatric Neurology Didactic Conference, Alberta Children's Hospital, University of Calgary, November 2012. "Perampanel: A Novel Anti-Seizure Drug."
121. Resident and Fellow Research Day, Alberta Children's Hospital, University of Calgary, November 2012. "Planning an Academic Career: Strategy and Serendipity."
122. Annual Calgary Epilepsy Symposium, Biomarkers in Epilepsy: From Bench to Bedside, October 2012. "Pharmacoresistance in Epilepsy."
123. Calgary Branch Rotary Club, Okotoks, Alberta, November 2012. "Dietary Treatments for Brain Disorders: You Become What You Eat."
124. Neonatal Grand Rounds, Department of Paediatrics, University of Calgary, March 2013. "Neonatal Seizures."
125. Paediatric Grand Rounds, Alberta Children's Hospital, University of Calgary Faculty of Medicine, May 2013. "Trials and Tribulations of Drug Development: Lessons Learned from the History of Anti-Seizure Drugs."

126. 4th Annual Calgary Epilepsy Symposium, Super Refractory Status Epilepticus, Calgary, Alberta, Canada, October 2013. "Neuroinflammation: FIRES and Status Epilepticus."
127. Alberta Children's Hospital Research Institute Trainee Day, University of Calgary, April 2014. "Elements of Success in Academia: The Baker's Dozen."
128. Developmental Neurosciences Grand Rounds, Alberta Children's Hospital, University of Calgary, January 2014. "Medical Marijuana Distilled: Brain Endocannabinoid Signaling and Potential for Epilepsy Therapeutics."
129. Department of Clinical Neurosciences Grand Rounds, University of Calgary, May 2014. "Basic Mechanisms of Tumor-Related Epilepsy."
130. Pediatric Grand Rounds, Alberta Children's Hospital, University of Calgary, May 2014. "Pathophysiological Mechanisms and Therapeutic Targets for Autism Spectrum Disorder"
131. Pediatric Academic Half-Day, Department of Pediatrics, University of Calgary, September 2014. "Hypotonia and Myopathies," "Neurocutaneous Disorders," and "Case Studies."
132. Paediatric Neurology Rounds, Alberta Children's Hospital, University of Calgary, February 2015. "A Critical Review of Pharmacological Treatments for Infantile Spasms."
133. Inaugural Robert Haslam Conference on Advances in Child Neurology and Developmental Neurosciences, Alberta Children' Hospital, University of Calgary, April 2015. "Neurobiology of Migraine."
134. Developmental Neurosciences Grand Rounds, Alberta Children's Hospital, University of Calgary, June 2014. "Ketones, Lactate and ATP: More Than Just Cellular Fuels."
135. Inaugural Quality Improvement Forum, Alberta Children's Hospital, University of Calgary, June 2014. "Brain Health: Coupling Resilience with Quality Improvement."
136. Annual Rocky Mountain Basic Science Symposium (RMBSS), Banff, Alberta, October 2015. "Pharmacodynamics of Neurological Drugs."
137. Pediatric Grand Rounds, Alberta Children's Hospital, University of Calgary, November 2015. "Marijuana and Cannabinoids for the Treatment of Epilepsy: Fact vs. Fiction."
138. Special Seminar, Alberta Children's Hospital, March 2016. "Pre-clinical and Clinical Pharmacology of Eslicarbazepine, a Novel Anti-Seizure Drug."
139. Pediatric Grand Rounds, Alberta Children's Hospital, University of Calgary, November 2016. "Ketogenic Therapies for Neurological Disorders: Treating Epilepsy, Brain Cancer, Autism and Cognitive Disorders."



140. Developmental Neurosciences Grand Rounds, Alberta Children's Hospital, University of Calgary, December 2016. "Anti-Seizure Drugs: Do Mechanisms Matter?"
141. Department of Clinical Neurosciences Grand Rounds, Cumming School of Medicine, University of Calgary, February 2017. "Ketogenic Therapies for Neurological Disorders."
142. Hotchkiss Brain Institute – Florey Institute (Melbourne, Australia) Epilepsy Symposium, University of Calgary, May 2017. "Metabolic Mechanisms of Functional Neuroprotection in Epilepsy and Autism Spectrum Disorder."
143. Paediatric Neurology Rounds, Alberta Children's Hospital, University of Calgary, May 2017. "Effects of Cannabidiol on Mitochondrial Bioenergetics and Homeostasis."
144. Paediatric Neurology Rounds, Alberta Children's Hospital, University of Calgary, December 2017. "An Update on the Neurotoxic Side-Effects of Cannabidiol."
145. Neonatal Grand Rounds, Department of Pediatrics, Alberta Children's Hospital, University of Calgary, January 2018. "Cannabis and Cannabidiol: Effects on the Developing Brain."
146. Sundial Growers Industry Day, Cannabis Research, Hotchkiss Brain Institute, University of Calgary, February 2018. "Effects of Cannabidiol on Cellular and Mitochondrial Metabolism."
147. Neonatal Grand Rounds, Department of Pediatrics, Alberta Children's Hospital, University of Calgary, October 2018. "Pharmacokinetics and Pharmacodynamics in Diseases of the Newborn Nervous System."
148. Developmental Neurosciences Grand Rounds, Alberta Children's Hospital, University of Calgary, January 2019. "Mitochondria in the Pathophysiology of and as a Therapeutic Target for Epilepsy."
149. Pediatric Grand Rounds, Department of Pediatrics, University of California San Diego, Rady Children's Hospital, October 2019. "Cannabinoids and Epilepsy: Promise and Peril".
150. Pediatric Neurology Teaching Conference, Rady Children's Hospital, December 2019. "Neuro-Jeopardy: Stupor and Coma".
151. Rady Children's Hospital Auxiliary Presentation, January 2020. "Child Neurology and Developmental Neurosciences at Rady Children's Hospital and University of California San Diego".
152. Pediatric Neurology Teaching Conference, Rady Children's Hospital, February 2020. "Introduction to Clinical Neuropharmacology: Pharmacokinetics and Pharmacodynamics".

153. Pediatric Neurology Teaching Conference, Rady Children's Hospital, June 2020. "Discontinuing Anti-Seizure Drugs".
154. Pediatric Neurology Teaching Conference, Rady Children's Hospital, July 2020. "Mechanisms of Seizure Genesis and of Anti-Seizure Medications".
155. Pediatrics Weekly Teaching Conference, Rady Children's Hospital, July 2020. "The Neurological Examination of Newborns, Infants, Children and Adolescents".
156. Pediatric Neurology Teaching Conference, Rady Children's Hospital, October 2020. "Rational Polypharmacy with Anti-Seizure Medications: Do Mechanisms Matter?"
157. Interactive Epilepsy Awareness and Education EXPO (Southern California), November 2, 2020. "Addressing Administration Challenges in the Management of Seizures Associated with Lennox-Gastaut-Syndrome."
158. School of Pharmacy, University of Washington, Pharmacy Course 531: Advances in the Diagnosis, Treatment and Management of Epilepsy, February 16, 2021. "Update on Mechanisms of Ketogenic Diet Action."
159. Pediatric Neurology Teaching Conference, Rady Children's Hospital, March 2021. "Lennox-Gastaut Syndrome: A Comprehensive Review."
160. Department of Neurosciences Grand Rounds, University of California San Diego, April 2021. "The Gut Microbiome and Epilepsy: A Critical Examination of This Emerging Relationship."
161. Department of Neurosciences Resident/Fellow Education Rounds, University of California San Diego, April 2021. "Approach Toward Developmental Regression."
162. Department of Pharmacology Seminar Series, University of California San Diego, July 2021. "Metabolism-Based Treatments for Epilepsy."
163. Epilepsy Foundation of San Diego, Annual Epilepsy Education Conference, July 2021 – "Epilepsy and Overcoming Change with Hope" – keynote lecture: "Epilepsy and the Ketogenic Diet in the Time of COVID-19."
164. Pediatrics Weekly Teaching Conference, Rady Children's Hospital, August 2021. "Systematic Approach Toward the Neurological Examination in the Pediatric Population".
165. School of Pharmacy, University of Washington, Pharmacy Course 531: Advances in the Diagnosis, Treatment and Management of Epilepsy, February 15, 2022. "Clinical Utility of the Ketogenic Diet and the Science Behind It."

166. Department of Pediatrics, Neurology Mini-Conference “Bezoar Pediatrics”, April 1, 2022. “Translational Brain Metabolism”.
167. Pediatric Neurology Teaching Conference, Rady Children’s Hospital, July 26, 2022. “Pediatric Neuropharmacology: Introduction to Principles”.