

CURRICULUM VITAE

PERSONAL DATA

Name Jaideep Kapur
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Date of Birth 01/01/1961
Citizen Unites States of America

EDUCATION

1979-1985 M.B., B.S., Maulana Azad Medical College, University of Delhi, Delhi, India
1985-1988 Ph.D., Neuroscience, University of Virginia, Charlottesville, Virginia
Advisor: E.W. Lothman, M.D., Ph.D.

TRAINING

1988-1989 Internship, Internal Medicine, Eastern Virginia School of Medicine, Norfolk, Virginia
1989-1992 Residency Training, Neurology, Medical College of Virginia, Virginia Commonwealth University, Richmond, Virginia
1992-1993 Clinical Electrophysiology and Epilepsy Fellowship, University Of Michigan, Ann Arbor, Michigan

ACADEMIC APPOINTMENTS

1991-1992 Chief Resident, Department of Neurology, Medical College of Virginia
1993-1994 Lecturer, Department of Neurology, University of Michigan
1994-1998 Assistant Professor, Department of Neurology, University of Michigan
1998-2001 Assistant Professor, Department of Neurology, University of Virginia
2001-2007 Associate Professor, (with tenure, 2004) Department of Neurology, University of Virginia
2006-2007 Harrison Distinguished Teaching Associate Professor, University of Virginia
2007-current Professor of Neurology, University of Virginia
2007-2010 Harrison Distinguished Teaching Professor, University of Virginia
2010-current Eugene Meyer III Professor of Neuroscience, University of Virginia
2007-2012 Vice-Chair for Research, Department of Neurology, University of Virginia
2012-2016 Director, Neurosciences Center, University of Virginia, Medical Center.
2016- Director, UVA Brain Institute

CERTIFICATION

1988 Education Commission for Foreign Medical Graduates
1989 Federal Licensure Examination
1994 American Board of Psychiatry and Neurology (Neurology #39819)
1996 American Board of Clinical Neurophysiology (EEG)

LICENSES

1992-1998 Michigan Permanent License #4301059717
1998-current Virginia Medical License #0101057328

HONORS

1972-1974 Government of India Merit Scholarship
1975-1977 Junior Science Talent Search Scholarship
1977-1985 National Talent Search Scholarship, National Council of Educational Research and Training, India
1985-1988 University of Virginia, Graduate Fellowship
1992 Distinguished Resident Award, Neurology, Medical College of Virginia, Virginia Commonwealth University
1992 Young Investigator Travel Award, American Epilepsy Society
2009-2010 President, American Epilepsy Society
2013 Epilepsy Research Recognition Award (Basic Science), American Epilepsy Society
2017 Ambassador Award, International League Against Epilepsy

PROFESSIONAL AFFILIATIONS

1986- Society for Neuroscience
1987- American Epilepsy Society
1990- American Academy of Neurology
1998- American Clinical Neurophysiology Society
2006- American Neurological Association

EDITORIAL BOARDS

1996-1999 Epilepsy Advances
1998-2006 Epilepsy Research
2001-2014 Contributing Editor, *Epilepsy Currents*
2011-2013 Neurology
2011-2014 Neurosurgery
2013-Current Experimental Neurology
2016-2020 Annals of Neurology

Ad hoc reviewer
1993-current

Annals of Neurology, Brain, Brain Research, British Journal of Pharmacology, Epilepsia, Experimental Neurology, European Journal of Neuroscience, Journal of Neurochemistry, Journal of Neurophysiology, Journal of Neuroscience, Journal of Physiology, Molecular Brain Research, Nature, Nature Neuroscience, Neurobiology of Disease,

Neuropharmacology, New England Journal of Medicine, Neuroscience, Neurosurgery, Neurology.

TEACHING ACTIVITIES

University Teaching: University of Michigan

1995-1998 Lectures in basic neurobiology course for the neurology residents
1995-1998 Lectures in the teaching course for clinical neurophysiology fellows.
Neurobiology of Epilepsy and Sleep

Clinical Teaching

1995-1997 University of Michigan M3 student ward teaching Clinical Neurology
1995-1997 University of Michigan teaching residents and fellows Clinical
Neurophysiology

University of Virginia: Classroom Teaching

1999-Now Medical Pharmacology: Anti-epileptic drugs lecture
1999 Introduction to Clinical Medicine: Neurology
1999-2006 Pharmacology: Molecules to systems (Pharm 902) 1 lecture, sedatives
1999-2005 Neurophysiology: (Biol 817 and Phys 862 GSAS) 4 lectures
2004-2012 Graduate Neurobiology (NESC703) 2 lectures
2005- Graduate Physiology (BIMS 832) 2 lectures

Clinical Teaching

1998-1999 Teaching Epilepsy and Clinical Neurology each Wednesday afternoon: 1
M4 student, 2 residents and 1 fellow
1999-2000 Teaching Epilepsy and Clinical Neurology each Wednesday afternoon: 1
M4 student, 2 residents and 3 fellows
1998- Teaching Epilepsy and Clinical neurophysiology Fellow and resident on
epilepsy service, 1-3 months each year.
2000- Supervising two fellows and a resident in epilepsy clinic one ½ day per
week

Ph.D. Dissertation supervised

2002-2005 Catherine Croft Swanwick: BDNF regulation of GABAergic synapses.
2002-2006 Stacey Ann Trotter (Bass): GABA synapses of the malformed cortex (Co-
mentored with Kevin Lee, Neuroscience)
2005-2011 Matthew Rannals, Homeostatic plasticity at GABAergic synapses.
2008-2012 Sarah Johnson, Neuronal synchrony during seizures (Co-mentored with
Jack Hudson, Chemical Engineering)
2010-2013 Xin Ren, Neuronal synchrony during Kindling (Co-mentored with Jack
Hudson, Chemical Engineering).

Dissertation Committee

1998-1999 Maria Denslow, Neuroscience Graduate Program.
2000 Edmund M. Talley, Neuroscience Graduate Program.
2005-2007 Catherine Christian
2005 Area paper committee, Rachel Hallmark

2006-2009	Mark Fitzgerald
2007-2008	Joel Baumgart
2009-2010	Justyna Pliecka
2010-2012	Charles Askew
2011-2014	Deblina De
2014-	James Hounshell
2014-	Eve Privman
2015-	Lise Harbom
2015-	Bryan Barker
2015-	Peter Klein
2016-	Kathryn Salvati
2015-	Alexander Ksendzovsky, MD

COMMITTEES & LEADERSHIP POSITIONS

American Epilepsy Society

1998	Scientific Program Committee
1998	Task Force on Epileptogenesis
1997-1999	Continuing Medical Education Committee,
1998-2001	Investigators Workshop Committee
1998-2002	Task force on reorganization of the annual meeting.
2000-2002	Chair, Internet CME sub-committee
2002-2004	Board of Directors
2003 2004	Co-Chair Year round CME committee
2002-2004	Research and Training Committee
2005-2007	Chair, Research and Training Committee, and Ex officio member of the Board
2007-2011	Executive Committee of the Board (Second Vice-President, vice President, President and Past President)
2009-2010	President
2011-2013	Nominating Committee
2012-2015	Chair, International Affairs Committee
2014-2016	Chair, Development Committee
2012-	Lennox and Lombroso Trust

International League Against Epilepsy

2010	Member, Therapeutics Commission
2015-	Member, Education Taskforce
2011-2016	Member, North American Commission,

American Neurological Association

2009-2012	Scientific Program Advisory Committee
2010-2012	Continuing Medical Education Committee
2016-2018	Board of Directors

Epilepsy Foundation (National)

2001-2009	Professional Advisory Board, Epilepsy Foundation of America
2001-2003	Chair, Research and Clinical Training Fellowship application review committee.

2006-2009 Chair, Research Council.
2006-2008 Executive Committee, Professional Advisory Board.

Epilepsy Research Foundation

2006-2008 Vice President & Member Board of Directors
2008-2010 President of the Board of Directors
2010-2013 Board of Directors

Citizens United against Epilepsy (CURE- Epilepsy Foundation)
2016-2018 Scientific Advisory Board

National Institutes of Health

1997 Ad Hoc Member, Brain Disorders and Clinical Neurosciences Initial review Groups, ZRG1-BDCN1, National Institutes of Health (NIH).
2001 Ad Hoc Member Fellowship Review Panel, Center for scientific review.
2001 Ad Hoc Member SSS-P Special Emphasis Panel, Cellular and Developmental Neurosciences, Integrated Review Group, Center for Scientific Review
2002 Ad Hoc Member Brain Disorders and Clinical Neurosciences Initial Review Group, BDCN1, Center for Scientific Review.
2002 Ad Hoc Member Brain Disorders and Clinical Neurosciences Initial Review Group, BDCN2, Center for Scientific Review.
2002 Ad Hoc Member Training Grant & Career Development Review Committee, Scientific Review Branch, NINDS,
2003 Ad Hoc Member Brain Disorders and Clinical Neurosciences Initial Review Group, BDCN2.
2004 Ad Hoc member Clinical Neurosciences and Disease study section, Center for Scientific review.
2004-2008 Permanent member Clinical Neurosciences and Disease study section, Center for Scientific review
2005-6 Ad hoc member, Epidemiology of Clinical Disorders and Aging review panel, CSR
2006-2008 CounterACT proposal Review panel NINDS
2009 Special Emphasis panel for challenge grants, member conflict review panel, R25 review panel.
2010-2016 Special emphasis panels, Member conflict reviews, etc. NIH CSR.
2016-2022 Member, Clinical Neuroplasticity and Neurotransmitters Study Section, NIH CSR.

Citizens United For Research in Epilepsy (CURE) Foundation

2003-current Grant review board
2016-2018 Scientific Advisory Board.

Tuberous Sclerosis Alliance

2005 Grant review board

Medical College of Virginia

1991-1992 House staff Council

1992 Internal Review Committee: Department of psychiatry, Residency Program, Medical College of Virginia.

University of Michigan

1995-1998 Faculty Recruitment Committee, Department of Neurology

University of Virginia

2001-2008 Continuing Medical Education Committee, School of Medicine
2004-2007 Research Advisory Committee, School of Medicine
2007 Pharmacology Chair Search Committee, School of Medicine
2008 Internal grant review committee, Office of Vice President of Research
2008-2012 Promotions and Tenure Committee, School of Medicine
2012-2015 Clinical Strategies Group, Medical Center and School of Medicine.
2012-2015 Clinical Research Oversight Committee, Medical Center and School of Medicine
2014-2016 Provost's University Promotions and Tenure Committee

CONSULTANT

2001-2005 US Army Medical Research and Materials Command: Advanced Anticonvulsant System focus group, Material Expert.
2009 Program Advisory Committee (PAC) for Specialized Neuroscience Research Program (SNRP), Universidad Central del Caribe, San Juan, PR
2012 Neurotherapeutics Pharma, GABA advisory group
2015 Eisai Pharmaceuticals: Role of AMPA receptors in epilepsy.

INTELLECTUAL PROPERTY

2013 Anti GABA-A receptor $\gamma 2$ and δ subunit mouse monoclonal antibody, Commercialized by UVA patent group.
2015 IND 119756: Food and Drug Administration (FDA) ESETT "A multicenter, randomized, blinded, comparative effectiveness study of fosphenytoin, valproic acid, or levetiracetam in the emergency department treatment of patients with benzodiazepine-refractory status epilepticus".

GRANT SUPPORT

Principal investigator (Current)

2003-2018 NINDS, RO1 NS044370 "Neurosteroid regulation of seizures". Direct costs: \$218,750
2014-2020 NIH-NINDS, U01NS088034 "Established Status Epilepticus Treatment Trial (ESETT)" Contact PI, Multiple PIs: with Drs. Robert Silbergleit and James Chamberlain. Direct costs \$6,170,975.
2000-2022 NIH-NINDS, RO1 NS040337 "Treatment of status epilepticus". Direct Costs: \$216,563

Co-Investigator 2014-2019	NIH NINDS 1R01NS091452 Calcium channel and glutamate receptor signaling at synapses". PI Julius Zhu Role Co-Investigator, effort 5%
2016-2018	NIH NINDS, R21 NS096461 Low Intensity Focused Ultrasound Neuromodulation" Role: Co-investigator , Principal Investigator: W. Jeffrey Elias
2016-2021	NIH NINDS RO1 1R01NS097726 Developing a drug-inducible gene therapy for temporal lobe epilepsy" Agency: Role: Co-investigator , Principal Investigator: Edward Perez-Reyes

Previous

1993-1994	Lennox Fellowship, American Epilepsy Society
1994	National Epifellows Foundation
1994-1999	Career Investigator Development Award, NIH, KO8-NS01748, "Heterogeneity of CNS GABA _A receptors"
1996-1997	Epilepsy Foundation of America: "Progression of status epilepticus"
1998-2003	NIH, Independent Scientist Award, KO2-NS 02081 "Understanding status epilepticus".
2002-2004	Independent Investigator Award, National Alliance for Research into Schizophrenia and Depression, "Mechanism of Action of Pregnenolone Sulfate"
2009-2010	Ivy foundation (intramural), with Prof. Jack Hudson "Deep brain stimulation for epilepsy with dynamic feedback".
2006-2011	NIH-NINDS UO1 NS58204 "Mechanism and treatment of nerve-agent induced seizures.
2010-2013	PR093963 Department of Defense, Congressionally Directed Medical Research Program (CDMRP) Peer-reviewed Program "M current-based therapies for nerve agent seizures"
2009-2014	2009-2014 NIH-NINDS R25NS065733 Multiple PI mechanism, CO PI with Karen Johnston, MD "NINDS Research Education Program for Residents and Fellows at the University of Virginia".
2011-2013	Silencing Hyperactive Neurons as a Treatment for Temporal Lobe Epilepsy CURE Epilepsy Foundation. Co- Principal Investigators: Ed Perez Reyes & Jaideep Kapur
2012-2013	Mechanisms of catamenial epilepsy, Epilepsy Foundation.

Support for Trainees:

2000-2001	Epilepsy Foundation of America, Postdoctoral Fellowship, Zakaria Mtchedlishvili, Ph.D., Research Associate
2002-2005	NIH, Predoctoral NRSA award, Catherine Croft.
2002-2003	Epilepsy Foundation of America, Postdoctoral Fellowship, Chengsan Sun, Research Associate.
2004-2006	NIH Predoctoral NRSA award, Stacey Trotter Co-mentor with Kevin Lee
2005-2010	NIH, KO8 Mentored Clinician Investigator Development Award, Howard Goodkin, Assistant Professor of Neurology and Pediatrics
2006-2008	American Heart Association Grant-in-Aid to Santina Zanelli, Assistant Professor, Pediatrics
2007-2008	Epilepsy Foundation Postdoctoral Fellowship to Suchitra Joshi Ph.D., Research Associate

2009	Epilepsy Foundation Postdoctoral Fellowship to Karthik Rajasekharan Ph.D., Research Associate
2010-2015	NIH, KO8 Mentored Clinician Investigator Development Award, Santina Zanelli, M.D. Assistant Professor of Pediatrics (Neonatology)
2017-2022	NIH, KO8 Mentored Clinician Investigator Development Award, Jennifer Burnsed, Assistant Professor of Pediatrics (Neonatology)

CURRENT TRAINEES

Faculty in the lab

2006-2014	Suchitra Joshi, Ph.D. Research Assistant Professor Dr. Jennifer Burnsed, MD, Assistant Professor Department of Pediatrics
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Postdoctoral fellows

2015	Huayu Sun, PhD
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Graduate students:

2015	Natalia Dabrowska (Visiting graduate student)
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PREVIOUS TRAINEES

1999-2006	Zakaria Mtchdlishvilli, Ph.D Current Position: Assistant Professor Center for Neuroscience Research Allegheny-Singer Research Institute
2002-2005	Catherine Croft Swanwick, Graduate student, Current position Science Writer
2002-2007	Howard Goodkin, M.D., Ph.D. current position: Shur Family Professor, Department of Neurology and Pediatrics, University of Virginia
2001-2008	Chengsan Sun, Ph.D. Current position, Instructor, Dept of Psychology, University of Virginia
2004-2007	Stacey Trotter Co-mentored with Prof. Kevin Lee, Neuroradiology fellow Johns Hopkins
2006-2009	Maksim Kozhemyakin, Ph.D., Assistant Professor Department of Neuroscience, University of Central Caribbean, Puerto Rico.
2006-2010	Matthew Rannals, Neuroscience Graduate Program. Current Postion: Postdoctoral fellow, Johns Hopkins University
2008-2011	Sarah Johnson, Chemical Engineering Co-mentored with Prof. Jack Hudson, Currently Postdoctoral Fellow, University of Nebraska.
2009-2013	Xin Ren, Chemical Engineering, Co mentored with Prof. Jack Hudson

BIBLIOGRAPHY

Peer Reviewed Publications:

- 1) Kapur J, Stringer JL, and Lothman EW, Evidence that repetitive seizures in the hippocampus cause a lasting reduction of GABAergic inhibition. *Journal of Neurophysiology*, (1989) 61:417-426.
- 2) Kapur J, and Lothman EW, Loss of recurrent inhibition precedes delayed spontaneous seizures in the hippocampus after tetanic electric stimulation. *Journal of Neurophysiology*, (1989) 61: 427-434.
- 3) Michelson HB, Kapur J and Lothman E W, Reduction of paired pulse inhibition in the CA1 region of the hippocampus by pilocarpine in naive and in amygdala-kindled animals. *Experimental Neurology*, (1989) 104: 264-271.
- 4) Kapur J, Michelson H B, Butterbaugh GG and Lothman EW, Evidence for a chronic loss of inhibition in the hippocampus after kindling: Electrophysiologic studies. *Epilepsy Research*, (1989) 4: 90-99.
- 5) Kapur J, Bennett Jr., JP, Wooten, GF and Lothman, EW Evidence for a chronic loss of inhibition in the hippocampus after kindling: Biochemical studies. *Epilepsy Research*, (1989) 4:100-108.
- 6) Kapur J, and Lothman EW, NMDA receptor activation mediates the loss of GABAergic inhibition induced by recurrent seizures. *Epilepsy Research*, (1990) 5: 103-111.
- 7) Lothman EW, Bertram EH, Kapur J and Stringer JL, Recurrent spontaneous hippocampal seizures in the rat as a chronic sequela to limbic status epilepticus. *Epilepsy Research*, (1990) 6:110-118.
- 8) Kapur J, Lothman EW and DeLorenzo RJ, Loss of GABA_A receptors during partial status epilepticus. *Neurology*, (1994) 44: 2407-2408.
- 9) Kapur J, Pillai A, and Henry TA, Psychogenic elaboration of simple partial seizures. *Epilepsia*, (1995) 36: 1126-1130.
- 10) Kapur J and Coulter DA, Experimental status epilepticus alters GABA_A receptor function in CA1 pyramidal neurons. *Annals of Neurology*, (1995) 38: 893-900.
- 11) Kapur J and Macdonald RL, Pharmacological properties of γ -aminobutyric acid type_A receptors in acutely dissociated rat dentate granule cells. *Molecular Pharmacology*, (1996) 50: 458-466.
- 12) Kapur J and Macdonald RL, Cyclic AMP-dependent protein kinase enhances hippocampal dentate granule cell GABA_A receptor currents. *Journal of Neurophysiology*, (1996) 76: 2626-2634.
- 13) Kapur J and Macdonald RL, Rapid seizure-induced reduction of benzodiazepine and ZN⁺⁺ sensitivity of hippocampal dentate granule cell GABA_A receptors. *Journal of Neuroscience*, (1997) 17: 7532-7540.
- 14) Kapur J and Macdonald RL, Postnatal development of hippocampal dentate granule cell GABA_A receptor pharmacological properties. *Molecular Pharmacology*, (1999) 55:444-452.

- 15) Tietz EI, Kapur J and Macdonald RL Functional GABA_A receptor heterogeneity of acutely dissociated hippocampal CA1 pyramidal cells. *Journal of Neurophysiology*, (1999) 81:1575-1586.
- 16) Kapur J, Haas KF and Macdonald RL Physiological properties of γ -aminobutyric acid_A receptors from acutely dissociated rat dentate granule cells. *Journal of Neurophysiology*, (1999) 81:2464-2471.
- 17) Drury I, Selwa L M, Kapur J, Varma N, Beydoun A and Henry TR, Value of inpatient diagnostic CCTV-EEG monitoring in the elderly. *Epilepsia* (1999) 40:1100-1102
- 18) Macdonald R L and Kapur J Acute cellular alterations in the hippocampus after status epilepticus. *Epilepsia* (1999) 40 (Suppl. 1); S9-S20.
- 19) Jaitly R, Dhaduk N, Jensen M E, Naeem M and Kapur J, Primary Cerebral Mucormycosis: A case report and literature review. *The Neurologist* (2000) 6:232-237.
- 20) Borris DJ, Bertram EH and Kapur J, Ketamine controls prolonged status epilepticus. *Epilepsy Research* (2000) 42:117-122.
- 21) Kearney JA, Plummer NW, Smith MR, Kapur J, Cummins TR, Waxman SG, Goldin AL, and Meisler MH, A gain-of-function mutation in the sodium channel gene *Scn2a* results in seizures and behavioral abnormalities. *Neuroscience* (2001) 102: 307-317.
- 22) Mtchedlishvili Z, Bertram EH and Kapur J, Diminished allopregnanolone enhancement of GABA_A receptor currents a rat model of chronic temporal lobe epilepsy. *Journal of Physiology* (2001) 537: 453-465.
- 23) Kelly K M, Kharlamov A, Hentosz TM, Kharlamova EA, Williamson JM, Bertram E H, Kapur J and Armstrong D M, Photothrombotic brain infarction results in seizure activity in aging Fischer 344 and Sprague Dawley rat. *Epilepsy Research* (2001) 47: 189-203.
- 24) Mtchedlishvili Z, Harrison MB and Kapur J Increased neurosteroid sensitivity of hippocampal GABA_A receptors during postnatal development. *Neuroscience*, (2003) 118:655-666.
- 25) Choudhury-Mukherjee I.; Schenck HA; Cechova S; Pajewski TN; Kapur J; Ellena J; Cafiso DS; Brown ML Design, synthesis, and evaluation of analogues of 3,3,3-trifluoro-2-hydroxy-2-phenyl-propionamide as orally available general anesthetics. *Journal of Medicinal Chemistry* (2003) 46:2494-2501.
- 26) Mtchedlishvili Z and Kapur J, A presynaptic action of the neurosteroid pregnenolone sulfate on GABAergic synaptic transmission. *Molecular Pharmacology* (2003) 64:857-864.
- 27) Mangan PS and Kapur J, Factors underlying bursting behavior in a network of cultured hippocampal neurons exposed to zero magnesium. *Journal of Neurophysiology* (2004) 91: 946-957.
- 28) Williamson J, Mtchedlishvili Z and Kapur J, Characterization of the convulsant action of pregnenolone sulfate. *Neuropharmacology*, (2004) 46: 856-864.
- 29) Yen W, Williamson J, Bertram EH and Kapur J A comparison of 3 NMDA receptor antagonists in the treatment of prolonged status epilepticus. *Epilepsy Research* (2004) 59: 43-50.
- 30) Swanwick CC, Harrison MB and Kapur J, Synaptic and extrasynaptic localization of brain-derived neurotrophic factor and the tyrosine kinase B receptor in cultured hippocampal neurons. *Journal of Comparative Neurology* (2004) 478:405-417.

- 31) Sun C, Sieghart W and Kapur J, Distribution of $\alpha 1$, $\alpha 4$, $\gamma 2$, and δ subunits of GABA_A receptors in hippocampal granule cells. *Brain Research* (2004), 1029 (2): 207-216.
- 32) Mangan PS*, Sun C, Carpenter M, Goodkin HP, Sieghart W and Kapur J Cultured hippocampal pyramidal neurons express two kinds of GABA_A receptors. *Molecular Pharmacology* (2005) 67: 775-788.
- 33) Goodkin HP, Yeh J-L, and Kapur J Status epilepticus increases the intracellular accumulation of GABA_A receptors. *Journal of Neuroscience* (2005) 25: 5511-5520.
- 34) Mtchedlishvili Z and Kapur J High affinity slowly desensitizing GABA_A receptors mediate tonic inhibition in dentate granule cells. *Molecular Pharmacology* (2006) 69: 564-575.
- 35) Swanwick CC, Murthy NR; Mtchedlishvili Z; Sieghart W and Kapur, J Development of GABAergic synapses in cultured hippocampal neurons. *Journal of Comparative Neurology* (2006) 495:497-510.
- 36) Swanwick CC, Murthy NR, and Kapur J Activity-dependent scaling of GABAergic synapse strength is regulated by brain-derived neurotrophic factor. *Molecular and Cellular Neuroscience* (2006) 31: 481-92.
- 37) Trotter SA, Kapur J, Anzivino MJ and Lee KS GABAergic Synaptic inhibition is reduced prior to seizure onset in a genetic model of cortical malformation. *Journal of Neuroscience* (2006) 26: 10756-67.
- 38) Sun C, Mtchedlishvili, Z; Bertram E, Erisir A and Kapur J Selective loss of dentate hilar interneurons contributes to reduced synaptic inhibition of granule cells in an electrical stimulation-based animal model of temporal lobe epilepsy. *Journal of Comparative Neurology* (2007) 500: 876-93.
- 39) Jones PJ, Wang Y, Smith MD, Hargus NJ, Eidam HS, White HS, Kapur J, Brown ML and Patel MK Hydroxyamide analogs of propofol exhibit state-dependent block of sodium channels in hippocampal neurons: implications for anticonvulsant activity. *Journal of Pharmacology and Experimental Therapeutics* (2007) 320:828-36.
- 40) Sun C*, Mtchedlishvili Z*, Erisir A and Kapur J Diminished neurosteroid sensitivity of synaptic inhibition and altered location of the $\alpha 4$ subunit of GABA-A receptors in an animal model of epilepsy. *Journal of Neuroscience* (2007) 27: 12641-12650.* contributed equally.
- 41) Rajasekaran K, Kapur J and Bertram EH Alterations in GABA-A receptor mediated inhibition in adjacent dorsal midline thalamic nuclei in a rat model of chronic limbic epilepsy. *Journal of Neurophysiology* (2007) 98:2501-2508.
- 42) Martin BS and Kapur J A combination of ketamine and diazepam synergistically controls refractory status epilepticus induced by cholinergic stimulation. *Epilepsia* (2008) 49: 248-255.
- 43) Goodkin HP, Joshi S, Mtchedlishvili Z, Brar J, and Kapur J Subunit-specific trafficking of GABA_A Receptors during status epilepticus. *Journal of Neuroscience* (2008) 28: 2527-2538.
- 44) Joshi S, and Kapur J. Slow intracellular accumulation of GABA_A receptor δ subunit is modulated by BDNF. *Neuroscience* (2009) 164:507-19.
- 45) Zanelli S, Naylor M and Kapur J. Nitric Oxide alters GABAergic synaptic transmission in cultured hippocampal neurons. *Brain Research* (2009) 1297:23-31.

- 46) Chen X, Shu S, Schwartz L, Sun C, Kapur J and Bayliss D Homeostatic regulation of synaptic excitability: tonic GABA-A receptor currents replace Ih in cortical pyramidal neurons of HCN1 knockout mice. *Journal of Neuroscience* (2010) 30: 2611-22.
- 47) Kozhemyakin M, Rajasekharan K and Kapur J Cholinesterase inhibition enhances glutamatergic synaptic transmission. *Journal of Neurophysiology* (2010) 103: 1748-1757.
- 48) Lawrence C, Martin BS, Sun C, Williamson J and Kapur J Endogenous neurosteroid synthesis modulates seizure frequency. *Annals of Neurology* (2010) 67: 689-693.
- 49) Rajasekaran K, Joshi S, Sun C, Mchedlishvili Z and Kapur J Receptors with low affinity for neurosteroids and GABA contribute to tonic inhibition of granule cells in epileptic animals. *Neurobiology of Disease* (2010) 40:490-501.
- 50) Du G, Chen X, Todorovic MS, Shu S, Kapur J, Bayliss DA TASK channel deletion reduces sensitivity to local anesthetic-induced seizures. *Anesthesiology* (2011) 115:1003-1011.
- 51) Joshi S, Sun C and Kapur J Generation and characterization of a mouse monoclonal antibody against the $\gamma 2$ subunit of GABA-A receptors. *Hybridoma* (2011) 30:537-42.
- 52) Rannals M and Kapur J Homeostatic strengthening of inhibitory synapses is mediated by the accumulation of GABA-A receptors. *Journal of Neuroscience* (2011) 31: 701-12.
- 53) Rusin CG, Johnson SE, Kapur J and Hudson J. Engineering the synchronization of neuron action potentials using global time-delayed feedback stimulation. *Physical Review E* (2011). 84: 066202.
- 54) Rajasekaran K, Todorovic M, Kapur J. Calcium-permeable AMPA receptors are expressed in a rodent model of status epilepticus. *Annals of Neurology* (2012) 72: 91-102.
- 55) Todorovic M, Cowan ML, Balint C and Kapur J Characterization of status epilepticus induced by two organophosphates. *Epilepsy Research* (2012) 101:268-76.
- 56) Sun J and Kapur J M-type potassium channels modulate Schaffer collateral CA1 glutamatergic synaptic transmission. *Journal of Physiology* (2012) 590:3953-64.
- 57) Kozhemyakin M, Rajasekaran K, Todorovic M, Kowalski S, Balint C and Kapur J Somatostatin type II receptor activation inhibits glutamate release and prevents status epilepticus. *Neurobiology of Disease* (2013) 54:94-104.
- 58) Joshi S and Kapur J NMDA receptor activation down-regulates expression of the δ subunit-containing GABA_A receptors in cultured hippocampal neurons. *Molecular Pharmacology* (2013) 84:1-11.
- 59) Joshi S Keith KJ, Ilyas A and Kapur J GABA-A receptor membrane insertion rates are specified by their subunit composition. *Cellular and Molecular Neuroscience* (2013) 56C:201-211
- 60) Sun C, Sun J, Erisir A and Kapur J Loss of cholecystinin-containing terminals in temporal lobe epilepsy. *Neurobiology of Disease* (2014) 62:44-55.
- 61) Dey D, Eckle VS, Vitko I, Sullivan KA, Lasiecka ZM, Winckler B, Stornetta RL, Williamson JM, Kapur J, Perez-Reyes E. A potassium leak channel silences hyperactive neurons and ameliorates status epilepticus (2014) *Epilepsia*. 55: 203-13.
- 62) Zanelli S, Goodkin HP, Kowalski S, Kapur J. Impact of transient acute hypoxia on the developing mouse EEG.(2014) *Neurobiology of Disease* 68:37-46.

- 63) Johnson S, Hudson J and Kapur J. Synchronization of action potentials during low magnesium induced bursting. (2015) *Journal of Neurophysiology* 113:2461-70.
- 64) Wang G, Bochorishvili G, Chen Y, Salvati KA, Zhang P, Dubel SJ, Perez-Reyes E, Snutch TP, Stornetta RL, Deisseroth K, Erisir A, Todorovic SM, Luo JH, Kapur J, Beenhakker MP, Zhu JJ. CaV3.2 calcium channels control NMDA receptor-mediated transmission: a new mechanism for absence epilepsy. *Genes Dev.* (2015);29(14):1535-51.
- 65) Zanelli SA, Rajasekaran K, Grosenbaugh DK, Kapur J. Increased excitability and excitatory synaptic transmission during in vitro ischemia in the neonatal mouse hippocampus. *Neuroscience.* (2015) 310:279-89.
- 66) Joshi S, Rajasekaran K, Williamson J, Kapur J. Neurosteroid-sensitive δ -GABA(A) receptors: A role in epileptogenesis? *Epilepsia.* (2017) 58:494-504.
- 67) Joshi S, Rajasekaran K, Sun H, Williamson J, Kapur J. Enhanced AMPA receptor-mediated neurotransmission on CA1 pyramidal neurons during status epilepticus. *Neurobiology of Disease* (2017) 103:45-53.

Peer –reviewed Reviews, Commentaries and other items listed in pubmed

- 1) Kapur J Status epilepticus and seizures. *Current opinion in critical care* (1998) 4:83-88.
- 2) Kapur J Status epilepticus in epileptogenesis. *Current Opinion in Neurology* (1999) 12:191-195.
- 3) Macdonald RL and Kapur J Pharmacological properties of recombinant and hippocampal dentate granule cell GABAA receptors. *Advances in Neurology* (1999)79:979-90.
- 4) Kapur J Hippocampal neurons express GABAA receptors insensitive to diazepam in hyperexcitable conditions. *Epilepsia*; (2000) 41: S86-S89.
- 5) Kapur J Prehospital treatment of status epilepticus with benzodiazepines is effective and safe. *Epilepsy Currents* (2002) 2: 121-4.
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- 7) Goodkin HP and Kapur J Responsiveness of status epilepticus to treatment with diazepam decreases rapidly as seizure duration increases *Epilepsy Currents* (2002) 3: 11-12.
- 8) Kapur J Role of Neuronal loss in the pathogenesis of recurrent spontaneous seizures. *Epilepsy Currents* (2003) 3: 166-167.
- 9) Kapur J Role of GABAA receptors in the pathogenesis of generalized epilepsies. *Experimental Neurology*, (2003) 184: 1-2.
- 10) Kapur J Dormant basket cell hypothesis revisited.....again. *Epilepsy Currents* (2003) 3: 225-226.
- 11) Swanwick CC, and Kapur J Role of Brain-Derived Neurotrophic Factor in Catamenial Epilepsy *Epilepsy Currents* (2004) 4: 154-155.
- 12) Swanwick CC, and Kapur J Is the tyrosine kinase B receptor a target for preventing epilepsy? (2005) *Epilepsy currents* 5:7-10.
- 13) Kapur J and Trotter S Homeostatic plasticity hypothesis and mechanisms of neocortical epilepsies. *Epilepsy Currents* (2005) 5:133-135.
- 14) Kapur J Disordered migration of interneurons within focal cortical dysplasia. *Epilepsy Currents* (2006) 6: 96-98.

- 15) Kapur J Is mesial temporal sclerosis a necessary component of temporal lobe epilepsy? *Epilepsy Currents* (2006) 6: 1-2.
- 16) Kapur J Is epilepsy a disease of synaptic transmission. *Epilepsy Currents* (2008) 8: 139-141.
- 17) Goodkin HP, Sun C, Yeh J, Mangan P and Kapur J GABA(A) receptor internalization during seizures. *Epilepsia* (2007) 48 (Supplement 5): 109-113.
- 18) Goodkin HP and J Kapur The impact of diazepam's discovery on the treatment and understanding of status epilepticus *Epilepsia*. (2009) 50:2011-8.
- 19) Kapur J Galanin Receptors Modulate Seizures. *Epilepsy Currents* (2011) 11: 125–127.
- 20) Joshi S, Rajasekaran K, Kapur J. GABAergic transmission in temporal lobe epilepsy: The role of neurosteroids. *Exp Neurol*. 2011 Nov 4. [Epub ahead ofprint].
- 21) Kapur J Emerging role of pannexins in seizures and status epilepticus. *Epilepsy Currents* (2012) 12:113-4.
- 22) Berkovic SF, Kapur J Are myotonia and epilepsy linked by a chloride channel? *Neurology* 2013 80:1074-5.
- 23) Bleck T, Cock H, Chamberlain J, Cloyd J, Connor J, Elm J, Fountain N, Jones E, Lowenstein D, Shinnar S, Silbergleit R, Treiman D, Trinkka E, Kapur J. The established status epilepticus trial 2013. *Epilepsia*. (2013) 6:89-92.
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- 25) Pitkänen A, Nehlig A, Brooks-Kayal AR, Dudek FE, Friedman D, Galanopoulou AS, Jensen FE, Kaminski RM, Kapur J, Klitgaard H, Löscher W, Mody I, Schmidt D. Issues related to development of antiepileptogenic therapies. *Epilepsia*. 2013 Aug;54 Suppl 4:35-43.
- 26) Schomer AC, Kapur J. The SAMUKeppra study in prehospital status epilepticus: lessons for future study. *Ann Transl Med*. 2016 4:468
- 27) Dworetzky BA, Kapur J. Gaining perspective on SUDEP: The new guideline. *Neurology*. 2017 88:1598-1599.
- 28) Wychowski T, Kapur J. Isocitrate dehydrogenase mutations: A biomarker for glioma-related excitability and seizures. *Neurology*. (2017) 88:1782-1783.

Book Chapters

- 1) Kapur J, Macdonald R L Status Epilepticus: A Proposed Pathophysiology, in *Treatment of Epilepsy* (1995) Ch 18:258-268 Editors Shorvon, Fish, Dreifuss, Thomas.
- 2) Quigg M, Bertram EH and Kapur J An unusual application of epilepsy surgery. In 110 *Puzzling Cases of Epilepsy*. (2002) Editors Schmidt D and Schachter SC Case 65: page 250-253.
- 3) Mchedlishvili Z and Kapur J Role of neurosteroids in epilepsy in *Neurosteroid Effects in the Central Nervous System: The Role of the GABA-A Receptor*, (2003) Chapter 14, 305-315 Editor Smith SS, CRC press.

- 4) Kapur J and Bertram E. Drug resistance in epilepsy and status epilepticus. *Epilepsy: Scientific Foundations of Clinical Practice*. (2003) Chapter 3, 21-40 Editors, Rho JM, Sankar R, Cavazos J, Marcel Dekker, New York, NY
- 5) Kapur J Pathophysiology of Status Epilepticus. *Nonconvulsive Status Epilepticus* (2009) Chapter 7, 81-94 Editors, Peter W Kaplan, Frank W Drislane Demos medical Publishing.
- 6) Rajasekaran K, Mchedlishvili Z, Sun C, and Kapur J Neurosteroid Modulation of GABAA Receptor-Mediated Synaptic Transmission in an Animal Model of Temporal Lobe Epilepsy In: Philip A. Schwartzkroin, editor *Encyclopedia of Basic Epilepsy Research*, Vol 1. Oxford: Academic Press; 2009. pp. 513-519.
- 7) Kapur J Pathophysiology of Status Epilepticus. In: Philip A. Schwartzkroin editor *Encyclopedia of Basic Epilepsy Research*, Vol. 1. Oxford: Academic Press; 2009. pp. 304-308.
- 8) Trotter S A, Fitzgerald M P, Kapur J and Lee K S The Tish Rat: An Animal Model of Cortical Malformation in the Study of Epilepsy. In: Philip A. Schwartzkroin, editor *Encyclopedia of Basic Epilepsy Research*, Vol. 1. Oxford: Academic Press; 2009. pp. 214-219.
- 9) GABA_A Receptor Plasticity During Status Epilepticus. Joshi S, Kapur J. (2012) In: Noebels JL, Avoli M, Rogawski MA, Olsen RW, Delgado-Escueta AV, editors. *Jasper's Basic Mechanisms of the Epilepsies* [Internet]. 4th edition.

INVITED LECTURES AND SYMPOSIA

National & International

1996	Regional Meritt Putnam Symposium: "Basic Mechanisms of Status Epilepticus" Boston, Massachusetts
1996-2001	30-35 th Annual Meeting of the American Clinical Neurophysiology Society, Basic Neurophysiology Course, "Pathophysiology of Epilepsy"
1996	First International Conference on Epilepsy: Advances in Understanding and Therapeutic Development, "Pharmacology of Hippocampal Dentate Granule Cell GABA _A Receptors", Orlando, Florida.
1997	32 nd Annual meeting of the American Epilepsy Society: Investigators' workshop, "Role of zinc in temporal lobe epilepsy".
1998	Annual meeting of the American Epilepsy Society: Moderator for platform session: status epilepticus.
1998	Fifth Workshop on Neurobiology of Epilepsy, Cesky Krumlov, Czech Republic
1999	Joint seminar, Neuroscience Program, and Department of Neurology, Medical College of Ohio, Toledo, OH "GABA _A receptor plasticity in temporal lobe epilepsy"
1999	Grand Rounds, Department of Neurology, Georgetown University, Washington DC "Status Epilepticus"
2000	Grand Rounds, Department of Neurology, Henry Ford Hospital, Detroit, MI "Status Epilepticus"
2001	Sixth Workshop on Neurobiology of Epilepsy, Iguazu Falls, Brazil
2001	"Ion channels in pathogenesis and treatment of epilepsy" KM Welch Lecture, Henry Ford Hospital, Dearborn, MI
2003	Epicenter, University of California, Irvine, CA, "Role of GABA-mediated inhibition in status epilepticus".

- 2003 Grand Rounds, Department of Neurology, University of California, Irvine, CA, "Status epilepticus".
- 2003 Grand Rounds, Department of Neurology, Vanderbilt University, Nashville, TN.
- 2003 Grand Rounds, Department of Neurology, Emory University, Atlanta, GA
- 2003 Epilepsy Research Seminar, Children's hospital of Pennsylvania, University of Pennsylvania, Philadelphia, PA
- 2004 "Epilepsy in children: neurobiological, clinical and therapeutic approach" International League Against Epilepsy Summer Course, Venice International University, San Servolo, Venice, Italy.
- 2005 Eighth Workshop on Neurobiology of Epilepsy, Villiers-le-Mahieu, France
- 2005 Annual Meeting of the American Epilepsy Society, Washington D.C. Hot Topics Symposium: Mechanisms of Drug Resistance,
- 2005 Investigator's Workshop: Animal Models of Catamenial Epilepsy, Annual Meeting of the American Epilepsy Society, Washington D.C.
- 2006 Grand rounds, Department of Neurosurgery, Cleveland Clinic Foundation, Cleveland OH
- 2006 Grand rounds, Epilepsy section, Department of Neurology, Cleveland Clinic Foundation, Cleveland OH
- 2006 Symposium "AEDs: Translating Recent Data Into Clinical Applications" New York University, New York, NY.
- 2006 34th Annual Hans Berger symposium, Virginia Commonwealth University, Richmond, VA.
- 2006 Gordon research Conference, Mechanisms of Epilepsy & Neuronal Synchronization Colby College Waterville, ME
- 2006 Current Trends in Epilepsy: An international symposium, New Delhi, India.
- 2007 1st London Colloquium on Status Epilepticus: Receptor mechanisms in status epilepticus.
- 2007 1st Annual CounterACT Network Research Symposium, NIH: Mechanisms and treatment of nerve agent induced seizures.
- 2008 Grand Rounds, Allegheny General Hospital, "Status Epilepticus"
- 2008 2nd Annual CounterACT Network Research Symposium, NIH
- 2008 2nd Center for Integrative Neuroscience and Neuroengineering Research (CINNR) Epilepsy Conference, Epilepsy Synchronizing research, Chicago, IL
- 2008 Biomedical Science Seminar series, Univ. of South Carolina School of Medicine, Columbia, SC "Seizures and Plasticity of GABA_A receptors"
- 2008 "GABA_A receptor trafficking in temporal lobe epilepsy", Gordon Research Conference on "Mechanisms of Epilepsy and Neuronal Synchronization".
- 2008 fMRI versus Wada test: debate Annual meeting of the Indian Epilepsy Society, New Delhi, India
- 2009 Grand Rounds, Department of Neurology, Albert Einstein College of Medicine, "Are seizures predictable? A biological approach to the problem"
- 2009 Merritt-Putnam symposium, International Epilepsy Congress of the International League Against Epilepsy, Budapest, Hungary "Acute molecular and functional changes in neurotransmission during early status epilepticus".
- 2009 Mechanism-based therapy of status epilepticus, Workshop on Neurobiology of Epilepsy, Pecs, Hungary
- 2009- Annual Meeting of the American Neurological Association, Baltimore MD, "Mentoring Clinician Investigators"

- 2009 Synaptic Inhibition in Health and Disease, Satellite symposium to Annual meeting of Society for Neuroscience, Chicago, "GABA-A receptor trafficking in Epilepsy".
- 2010 Status Epilepticus and Management of Seizures in the ICU, Epilepsy Update, Mumbai, India
- 2010 Co-Morbidities in Epilepsy: Current Issues in Management, Epilepsy Update, Mumbai, India
- 2010 Are Seizures Predictable? Answers from Clinical Neurophysiology and Biology. Hans Berger Lecture: 38th Annual Hans Berger Symposium, Virginia Commonwealth University.
- 2010 Can Deep Brain Stimulation Treat Seizures? 38th Annual Hans Berger Symposium, Virginia Commonwealth University.
- 2010- Annual Meeting of the American Neurological Association, Baltimore MD, "Transition from K award to RO1"
- 2011 Virginia Neurological Society, Annual Meeting, "Status Epilepticus".
- 2011 Clinical Grand Rounds, National Institute of Neurological Diseases and Stroke (NINDS) "Mechanism based Therapy of Status Epilepticus"
- 2011 Teaching Session, International Epilepsy Congress, Rome, "Plasticity of ion channels and receptors during epileptogenesis".
- 2009-2011 Becoming an Independent RO1 Funded Investigator: Strategies for Success... from Basic Science to Clinical Trials: NINDS career development symposium at the annual meeting of American Neurological Association.
- 2011 Annual meeting of the American Epilepsy Society, Presidential Symposium: Opportunities From Shifting Research Paradigms
- 2011 Annual meeting of the American Epilepsy Society: Neuroscience Special Interest Group: Homeostatic plasticity in epilepsy.
- 2011 Annual meeting of the American Epilepsy Society: Professional development opportunities at AES.
- 2012 Grand Rounds, Department of Neurology, Johns Hopkins University, Baltimore, MD, "Status epilepticus"
- 2012 American Academy of Neurology, Annual meeting: Epilepsy Integrated Neuroscience: Recent Advances in Basic Science with Clinical Relevance.
- 2012 Grand Rounds, Department of Neurology, Mayo Clinic, Rochester, MN "Established Status Epilepticus Treatment Trial"
- 2012 Judith Hoyer Lecture, American Epilepsy Society, Annual meeting, San Diego, CA.
- 2012 Annual meeting of the Mexican Chapter of International League Against Epilepsy, Durango City Mexico "GABA systems and epilepsy: Basic and Clinical aspects"
- 2013 Grand Rounds, Neurology, Wayne State University, Detroit, MI.
- 2013 4th London-Innsbruck Colloquium on status epilepticus and acute seizures, Salzburg, Austria "Receptor trafficking hypothesis – revisited" and "Established Status Epilepticus Trial".
- 2014 Grand rounds, Neurology, University of Michigan, Ann Arbor, MI Mechanisms of Catamenial epilepsy.
- 2015 Annual meeting of the Chilean Chapter of the International League Against Epilepsy, Santiago, Chile, 3 lectures and a workshop on status epilepticus and seizure emergencies.
- 2015 31st International Epilepsy Congress, Istanbul, Turkey, "Basic mechanisms of Status Epilepticus".

- 2015 31st International Epilepsy Congress, Istanbul, Turkey, Organizer “Leadership Training
- 2016 Grand Rounds, University of Kentucky, Lexington, Mechanisms and treatment of status epilepticus.
- 2016 Grand Rounds, George Washington University, Washington, DC, Mechanisms and treatment of status epilepticus.
- 2016 Annual meeting of the American Academy of Neurology (AAN), Vancouver, Canada, “Mechanisms and treatment of status epilepticus”, Emergency Neurology session, Moderator Laurie Gutman.