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Publications citing Kerr Scientific Instruments

1. Misol Ahn, Franck Kalume, Rose Pitstick, Abby Oehler, George Carlson, and Stephen J. DeArmond (2016) **Brain Aggregates: An Effective In Vitro Cell Culture System Modeling Neurodegenerative Diseases.** Journal of Neuropathology Experimental Neurology 75: 252-262.
2. Edyta K. Bichler, Courtney C. Elder, and Paul S. García (2017) **Cellular and Molecular Properties of Neurons Clarithromycin increases neuronal excitability in CA3 pyramidal neurons through a reduction in GABAergic signaling.** Journal of Neurophysiology 117: 93–103.
3. Shane D. Hellyer, Andrew I. Selwood, Lesley Rhodes, D. Steven Kerr (2011) **Marine algal pinnatoxins E and F cause neuromuscular block in an *in vitro* hemidiaphragm preparation.** Toxicon 58: 693–699.
4. Shane D. Hellyer, Andrew I. Selwood, Lesley Rhodes, D. Steven Kerr (2013) **Neuromuscular blocking activity of pinnatoxins E, F and G.** Toxicon 76: 214–220

5. Simran Maggo and John C. Ashton (2014) **Effects of HMG-CoA reductase inhibitors on learning and memory in the guinea pig.** *European Journal of Pharmacology* 723:294-304
6. Diana M. Mathis, Jennifer L. Furman, Christopher M. Norris (2011) **Preparation of Acute Hippocampal Slices from Rats and Transgenic Mice for the Study of Synaptic Alterations during Aging and Amyloid Pathology.** *Journal of Visualized Experiments* URL: <http://www.jove.com/details.php?id=2330> DOI: 10.3791/2330
7. Prasanta K. Nayak and D. Steven Kerr (2015) **Functional preservation of hippocampal CA1 by low-dose GYKI-52466 preconditioning in a rat model of hypoxic-ischemic brain injury.** *Brain Research* 1613: 100–109.
8. Jack R. Rivers, Simran D.S. Maggo and John C. Ashton (2012) **Neuroprotective effect of hydroxypropyl- β -cyclodextrin in hypoxia-ischemia.** *NeuroReport* 23(3):134-8.
9. P.M. Sawant, B.A. Weare, P.T. Holland, A.I. Selwood, K.L. King, C.M. Mikulski, G.J. Doucette, D.O. Mountfort, and D.S. Kerr (2007) **Isodomoic acids A and C exhibit low KA receptor affinity and reduced in vitro potency relative to domoic acid in region CA1 of rat hippocampus.** *Toxicon* 50: 627–638.
10. Logan J. Voss, Magdalena Brock, Cecilia Carlsson, Alistair Steyn-Ross, Moira Steyn-Ross, James W. Sleight (2012) **Investigating paradoxical hysteresis effects in the mouse neocortical slice model.** *European J. Pharmacology* 675: 26–31.
11. Logan J. Voss, Shwetha A. George, James W. Sleight (2012) **Testing neocortical slice viability in non-perfused no-magnesium artificial cerebrospinal fluid solutions.** *J. Neurosci. Methods* 204: 273–275.
12. Logan J. Voss, Claudia van Kan, and James W. Sleight (2013) **Quantification of Neocortical Slice Diffusion Characteristics Using Pharmacokinetic and Pharmacodynamic Modelling.** *ISRN Neuroscience* Vol. 2013, Article ID 759640, 5 pp. <http://dx.doi.org/10.1155/2013/759640>
13. Logan J Voss, Claudia van Kan and James W Sleight (2013) **Quantitative investigation into methods for evaluating neocortical slice viability.** *BMC Neuroscience* 14:137.

14. Logan J. Voss, Cecilia Hansson Baas, Linnea Hansson, Duan Li, James W. Sleight (2013) **Investigation into the effect of the general anaesthetic etomidate on local neuronal synchrony in the mouse neocortical slice.** Brain Research 1526: 65-70.
15. Logan J Voss, Emelie Gauffin, Alexandra Ringqvist, James W. Sleight (2014) **Investigation into the role of gap junction modulation of intracortical connectivity in mouse neocortical brain slices.** Brain Research 1553: 24-30.
16. Logan J. Voss, Liisa Andersson and Anna Jadelind (2015) **The general anesthetic propofol induces ictal-like seizure activity in hippocampal mouse brain slices.** SpringerPlus 4:816 DOI 10.1186/s40064-015-1623-1
17. Logan J. Voss and James W. Sleight (2015) **Cortico-centric effects of general anesthetics on cerebrocortical evoked potentials.** Neuroscience Bulletin 31: 697–704.
18. Logan J. Voss, Martyn G. Harvey and James W. Sleight (2016) **Inhibition of astrocyte metabolism is not the primary mechanism for anaesthetic hypnosis.** SpringerPlus 5:1041 DOI 10.1186/s40064-016-2734-z
19. Carolin Wippel, Jana Maurer, Christina Fortsch, Sabrina Hupp, Alexandra Bohl, Jiangtao Ma, Timothy J. Mitchell, Stephanie Bunkowski, Wolfgang Bruck, Roland Nau, Asparouh I. Iliev (2013) **Bacterial Cytolysin during Meningitis Disrupts the Regulation of Glutamate in the Brain, Leading to Synaptic Damage.** PLOS Pathogens <https://doi.org/10.1371/journal.ppat.1003380>
20. Yusuf A., Ayo J.O., Abba A.A., Mohammed A., Kalume F. (2016) **Elevated extracellular potassium ion concentrations suppress hippocampal oscillations in a mouse model of Dravet syndrome in-vitro.** Journal African Assoc. Physiol. Sci. 4 (2): 81-88.
21. Melanie M. Pleiss, Pradoldej Sompol, Susan D. Kraner, Hafiz Mohammad Abdul, Jennifer L. Furman, Rodney P. Guttmann, Donna M. Wilcock, Peter T. Nelson, Christopher M. Norris (2016) **Calcineurin proteolysis in astrocytes: Implications for impaired synaptic function.** Biochimica et Biophysica Acta 1862: 1521–1532.

22. Sompol P, Furman JL, Pleiss MM, Kraner SD, Artiushin IA, Batten SR, Quintero JE, Simmerman LA, Beckett TL, Lovell MA, Murphy MP, Gerhardt GA, and Norris CM (2017) **Calcineurin/NFAT signaling in activated astrocytes drives network hyperexcitability in A β -bearing mice.** *Journal of Neuroscience*, 37: 6132-6148.
23. Besing RC, Rogers CO, Paul JR, Hablitz LM, Johnson RL, McMahon LL, and Gamble KL (2017) **GSK3 activity regulates rhythms in hippocampal clock gene expression and synaptic plasticity.** *Hippocampus*, 27: 890–898.
24. Edyta K. Bichler, Courtney C. Elder and Paul S. García (2017) **Clarithromycin increases neuronal excitability in CA3 pyramidal neurons through a reduction in GABAergic signaling.** *Journal of Neurophysiology* 117: 93–103.
25. Naga Rajesh Gorlamandala (2017) **The contribution of canonical transient receptor potential (TRPC) ion channels to ischemic brain injury.** PhD Thesis, March 2017, UNSW Sydney
26. Logan J Voss, Sebastian Karalus, Vilhelm Englund, James W. Sleight (2018) **Ketamine Action in the *In Vitro* Cortical Slice Is Mitigated by Potassium Channel Blockade.** *Anesthesiology* 128:1167-74.
27. Simran Maggo and John C. Ashton (2018) **Effect of Cannabinoid Receptor Agonists on Isolated Rat Atria.** *Journal of Cardiovascular Pharmacology* 72: 191-194.
28. Magdalena Przybyla, Janet van Eersel, Annika van Hummel, Julia van der Hoven, Miheer Sabale, Anne Harasta, Julius Muller, Mehul Gajwani, Emmanuel Prikas, Thomas Mueller, Claire H. Stevens, John Power, Gary D. Housley, Tim Karl, Michael Kassiou, Yazid D. Ke, Arne Ittner and Lars M. Ittner (2020) **Onset of hippocampal network aberration and memory deficits in P301S tau mice are associated with an early gene signature.** *Brain* 143: 1889–1904.
29. Farah A. Khokhar, Logan J. Voss, D. Alistair Steyn-Ross and Marcus T. Wilson (2020). **Design and demonstration in vitro of mouse-specific Transcranial Magnetic Stimulation coil.** bioRxiv preprint doi: <https://doi.org/10.1101/2020.01.09.900993>

30. Logan J. Voss (2020) **Relationship between artificial cerebrospinal fluid oxygenation, slice depth and tissue performance in submerged brain slice experiments.** Neuroscience Letters vol.736.
31. Logan J. Voss, Nicola Whittle, Oliver Lamber, Gustav Envall, Jamie Sleigh (2020) **Cerebrospinal fluid oxygen optimisation for rescue of metabolically challenged in vitro cortical brain tissue.** IBRO Reports 9: 302-309.
32. Logan J. Voss and Jamie W. Sleigh (2020) **A Metabolic Mechanism for Anaesthetic Suppression of Cortical Synaptic Function in Mouse Brain Slices—A Pilot Investigation.** Int. J. Mol. Sci. 21(4703): 1-13.
33. Logan J. Voss, Claudia van Kan, Gustav Envall, Oliver Lamber (2020) **Impact of variation in tissue preparation methodology on the functional outcome of neocortical mouse brain slices.** Brain Research 1747: 11-15.
34. Jennifer A. Davis, Jodi R. Paul, Stefani D. Yates, Elam J. Cutts, Lori L. McMahon, Jennifer S. Pollock, David M. Pollock, Shannon M. Bailey, Karen L. Gamble (2021) **Time-restricted feeding rescues high-fat-diet-induced hippocampal impairment.** iScience 24(102532): 1-9.
35. Chanchanok Chaichim, Madeleine J. Cannings, Gadiel Dumlao, and John M. Power (2021) **Long-term depression of excitatory transmission in the lateral septum.** Journal of Neurophysiology 125: 1825-1832.
36. Leurs et al. (2021) **GHB analogs confer neuroprotection through specific interaction with the CaMKII α hub domain.** Proceedings National Academy Science 118(31): 1-9.
37. Pradoldej Sompol, Jenna L. Gollihue, Susan D. Kraner, Irina A. Artiushin, Ryan A. Cloyd, Emad A. Chishti, Shon A. Koren, Grant K. Nation, Jose F. Abisambra, Orsolya Huzian, Lajos I. Nagy, Miklos Santha, Laszlo Hackler Jr, Laszlo G. Puskas, Christopher M. Norris (2021) **Q134R: Small chemical compound with NFAT inhibitory properties improves behavioral performance and synapse function in mouse models of amyloid pathology.** Aging Cell <https://doi.org/10.1111/accel.13416>

38. Logan J. Voss, Maxence Plouviez, Nicola Whittle (2021) **Microalgae-based photosynthetic strategy for oxygenating avascularised mouse brain tissue – An in vitro proof of concept study.** Brain Research 1768 (2021) 147585. <https://doi.org/10.1016/j.brainres.2021.147585>
39. Chanchanok Chaichim, Tamara Tomanic, Holly Stefen, Esmeralda Paric, Lucy Gamaroff, Alexandra K. Suchowerska, Peter W. Gunning, Yazid D. Ke, Thomas Fath and John Power (2021) **Overexpression of Tropomyosin Isoform Tpm3.1 Does Not Alter Synaptic Function in Hippocampal Neurons.** Int. J. Mol. Sci. 22: 9303-9319.
40. Jyoti Singh, Prasanta Kumar Nayak, Ashwini Kumar Kushwaha, Dev Nath Singh Gautam, Manmath Kumar Nandi (2022) **Neuroprotective role of Sida acuta Burm. f. in scopolamine-induced memory impairment rat model: An electrophysiological and behavioral study.** Journal of Drug Research in Ayurvedic Sciences 8(1): 65-73.
41. Lacy K. Goode, Allison R. Fusilier, Natalie Remiszewski, Jacob M. Reeves, Kavitha Abiraman, Matthew Defenderfer, Jodi R. Paul, Lori L. McMahon, and Karen L. Gamble (2022) **Examination of Diurnal Variation and Sex Differences in Hippocampal Neurophysiology and Spatial Memory.** ENeuro 9:1-17. <https://doi.org/10.1523/ENEURO.0124-22.2022>
42. Jennifer A. Davis, Jodi R. Paul, Mugdha V. Mokashi, Stefani A. Yates, Daniel J. Mount, Hira A. Munir, Lacy K. Goode, Martin E. Young, David B. Allison, Karen L. Gamble (2022) **Circadian disruption of hippocampus in an early senescence male mouse model.** Pharmacol Biochem Behav. doi:10.1016/j.pbb.2022.173388.
43. Kathleen Anne Guzek Whiting (2022) **Microglial-Neurovascular Interactions and Neuronal Function at High Altitude.** PhD Dissertation; Uniformed Services University of the Health Sciences.

44. MacPherson KP, Eidson LN, Houser MC, Weiss BE, Gollihue JL, Herrick MK, de Sousa Rodrigues ME, Sniffen L, Weekman EM, Hamilton AM, Kelly SD, Oliver DL, Yang Y, Chang J, Sampson TR, Norris CM and Tansey MG (2023) **Soluble TNF mediates amyloid-independent, diet-induced alterations to immune and neuronal functions in an Alzheimer's disease mouse model.** *Frontiers Cellular Neuroscience* 17:895017. doi: 10.3389/fncel.2023.895017

45. Sandesh Panthi, Paul Szyszka, Caroline W. Beck (2023) **Expression of mRNA encoding two gain-of-function cyfip2 variants associated with DEE65 results in spontaneous seizures in *Xenopus laevis* tadpoles.** Preprint: doi: <https://doi.org/10.1101/2022.12.07.519540>