



Bruce G. Lyeth, Ph.D.

Philosophy of Care The long-range goal of my research program is to develop novel therapeutic strategies targeted at reducing the debilitating consequences of traumatic brain injury.

Research/Academic Interests	Dr. Lyeth's laboratory uses a variety of pharmacological, surgical, neuroanatomical, and behavioral methods to investigate the neural mechanisms involved in traumatic brain injury pathology. A major research effort examines excitotoxic cascades affecting cell survival and behavior. Pre-clinical testing of novel therapeutic strategies and compounds are routinely performed in his laboratory.
Title	Professor Emeritus
Specialty	Research
Department	Neurological Surgery
Division	Neurological Surgery
Additional Phone	Physician Referrals: 800-4-UCDAVIS (800-482-3284)
Education	Ph.D., Psychology, Virginia Commonwealth University, Richmond VA 1986 B.A., Christopher Newport College, Newport News VA 1974 M.S., Psychology, Radford College, Radford VA 1976
Fellowships	Postdoctoral Neurosurgery/Traumatic Brain Injury Research, Medical College of Virginia, Richmond VA 1986-1987
Professional Memberships	American Association for the Advancement of Science International Neurotrauma Society National Neurotrauma Society Society for Neuroscience
Honors and Awards	Edward A. Dickson Emeriti Professorship, UC Davis, 2016, 2017
Select Recent Publications	Zhou W, Kholiqov O, Zhu J, Zhao M, Zimmermann LL, Martin RM, Lyeth BG, Srinivasan VJ. Functional interferometric diffusing wave spectroscopy of the human brain. <i>Sci Adv.</i> 2021 May 12; 7(20):eabe0150. doi:10.1126/sciadv.abe0150. PMID:33980479.

Kamal K, Keiter JA, Binyamin TR, de la Cruz Dapula JN, Vergara AR, Hawk CW, Izadi A, Lyeth B, Gurkoff GG, Sharp FR, Waldau B. Mechanical injury and blood are drivers of spatial memory



Bruce G. Lyeth, Ph.D.

deficits after rapid intraventricular hemorrhage. *Neurobiol Dis.* 2020 Nov;145:105084. doi: 10.1016/j.nbd.2020.105084. Epub 2020 Sep 14. PMID:32941979.

Abdul-Wahab R, Long MT, Ordaz R, Lyeth BG, Pfister BJ. Outcome measures from experimental traumatic brain injury in male rats vary with the complete temporal biomechanical profile of the injury event. *J Neurosci Res.* 2020 Oct;98(10):2027-2044. doi:10.1002/jnr.24670. Epub 2020 Aug 2. PMID:32741029.

Liu Q, Jiao Y, Yang W, Gao B, Hsu DK, Nolta J, Russell M, Lyeth B, Zanto TP, Zhao M. Intracranial alternating current stimulation facilitates neurogenesis in a mouse model of Alzheimer's disease. *Alzheimers Res Ther.* 2020 Jul 23;12(1):89. doi:10.1186/s13195-020-00656-9. PMID:32703308.

Russell MJ, Goodman TA, Visse JM, Beckett L, Saito N, Lyeth BG, Recanzone GH. Sex and Electrode Configuration in Transcranial Electrical Stimulation. *Front Psychiatry.* 2017 Aug 14;8: 147. doi:10.3389/fpsyg.2017.00147. PMID:28855877.

Feng JF, Liu J, Zhang L, Jiang JY, Russell M, Lyeth BG, Nolta JA, Zhao M. Electrical Guidance of Human Stem Cells in the Rat Brain. *Stem Cell Reports.* 2017 Jul 11;9(1):177-189. doi:10.1016/j.stemcr.2017.05.035. Epub 2017 Jun 29. PMID:28669601.

Liu DZ, Waldau B, Ander BP, Zhan X, Stamova B, Jickling GC, Lyeth BG, Sharp FR. Inhibition of Src family kinases improves cognitive function after intraventricular hemorrhage or intraventricular thrombin. *J Cereb Blood Flow Metab.* 2017 Jul;37(7):2359-2367. doi:10.1177/0271678X16666291. Epub 2016 Jan 1. PMID:27624844.

Lyeth BG. Historical Review of the Fluid-Percussion TBI Model. *Front Neurol.* 2016 Dec 2;7:217. doi:10.3389/fneur.2016.00217. PMID:27994570.



Bruce G. Lyeth, Ph.D.

Lee DJ, Gurkoff GG, Izadi A, Seidl SE, Echeverri A, Melnik M, Berman RF, Ekstrom AD, Muizelaar JP, Lyeth BG, Shahlaie K. Septohippocampal Neuromodulation Improves Cognition after Traumatic Brain Injury. *J Neurotrauma*. 2015 Nov 15;32(22):1822-32. doi:10.1089/neu.2014.3744. Epub 2015 Sep 2. PMID:26096267.

Huang XJ, Glushakova O, Mondello S, Van K, Hayes RL, Lyeth BG. Acute Temporal Profiles of Serum Levels of UCH-L1 and GFAP and Relationships to Neuronal and Astroglial Pathology following Traumatic Brain Injury in Rats. *J Neurotrauma*. 2015 Aug 15;32(16):1179-89. doi:10.1089/neu.2015.3873. Epub 2015 May 14. PMID:25763798.

© 2024 UC Regents