

Curriculum Vitae

Peter J. West, PhD

Research Associate Professor
Department of Pharmacology and Toxicology
Interdepartmental Neuroscience Program
Epilepsy Therapy Screening Program (ETSP)
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Education

2003-2007 University of Utah, Salt Lake City, UT: Postdoctoral (*Pharmacology and Toxicology*)
1997-2003 University of Utah, Salt Lake City, UT: PhD (*Neuroscience*)
1993-1997 Lehigh University, Bethlehem, PA: BS (*Biochemistry, highest honors*)

Personal Statement

For the last 25 years, I have specialized in the use of *in-vivo* and *in-vitro* electrophysiological techniques to study the pharmacology of investigational compounds for the treatment of multiple pathological conditions (e.g., chronic pain, dementias, and epilepsy). This work has been conducted both in academia as well as the pharmaceutical industry where I previously worked as a preclinical drug discovery and development scientist. Presently, I am a co-investigator in the Epilepsy Therapy Screening Program (ETSP) Contract Site at the University of Utah (Principal Investigator, Karen S. Wilcox, Ph.D.). In this position, I lead a team of scientists who perform *in-vivo* and *in-vitro* electrophysiological evaluations of investigational compounds using our 24/7 video-EEG suite (this facility is equipped to simultaneously monitor 108 mice) and our multi-channel *in-vitro* brain-slice electrophysiology workstations. Regarding the latter, my lab is equipped to perform simultaneous and independent recordings from eight *in-vitro* brain slices, thus allowing for the high-throughput screening of compounds for their effects on phenomena such as spontaneous burst-excitation, synaptic plasticity, and/or numerous molecular targets of interest. I have successfully used these techniques to develop and establish several models of seizures and epilepsy that are actively being used by the ETSP to screen investigational compounds (e.g., the spontaneously bursting slice model from post-kainate status epilepticus rats and the intra-amygdala kainate mouse model of temporal lobe epilepsy). I am presently developing an *in-vitro* model of post-traumatic epilepsy. This contract (NIH Contract: 75N95022C00007) has recently been renewed for an additional five years.

In addition to my position within the contract site for the ETSP, I am also engaged in academic research focused on the pathophysiology and treatment of epilepsy-associated cognitive comorbidities and the development of novel animal models of epilepsy. Regarding the latter, my laboratory has recently begun developing the first animal model of hypothalamic hamartoma and epilepsy. This NINDS-supported effort (R21 NS125211, West PI, 09/15/2021 – 02/28/2024 NCE) will provide the research community with an unprecedented opportunity to begin the search for novel therapies for the treatment resistant seizures and epileptogenesis occurring in people with epilepsy due to hypothalamic hamartoma. This work carries

on the long history of novel epilepsy animal model development that has occurred academically at the University of Utah conducted by ETSP contract site faculty. In many cases, these academic efforts have ultimately resulted in the incorporation and use of these animal models by the ETSP. Accordingly, I believe that my academic interests are fully compatible with the mission, shared by the ETSP, of identifying treatments for drug refractory epilepsy, disease prevention, and modification.

Professional Experience

2022-present	<i>Research Associate Professor.</i> Department of Pharmacology and Toxicology, University of Utah, Salt Lake City, UT.
2012-2021	<i>Research Assistant Professor.</i> Interdepartmental Neuroscience Program, University of Utah, Salt Lake City, UT.
2011-2021	<i>Research Assistant Professor.</i> Department of Pharmacology and Toxicology, University of Utah, Salt Lake City, UT.
2010-present	<i>Co-Investigator.</i> Epilepsy Therapy Screening Program (ETSP), University of Utah, Salt Lake City, UT.
2007-2010	<i>Research Scientist.</i> <i>In vitro</i> electrophysiology. CNS Biology, Cephalon Inc., West Chester, PA.
2003-2007	<i>Postdoctoral Fellow.</i> Mediation and modulation of synaptic transmission by kainate receptors of the medial entorhinal cortex. Advisor: Karen S. Wilcox, PhD. Department of Pharmacology and Toxicology, University of Utah, Salt Lake City, UT.
1997-2003	<i>Graduate Research Student.</i> Delta- and mu-Conotoxins - Peptides from cone snail venoms that selectively affect tetrodotoxin-sensitive and tetrodotoxin-resistant voltage-gated sodium channels. Advisors: Baldomero M. Olivera, PhD, & Doju Yoshikami, PhD. Neuroscience Program, University of Utah, Salt Lake City, UT.
1996-1997	<i>Undergraduate Research Student.</i> Analysis of heparin's effects on chondroitin sulfate and heparan sulfate proteoglycan expression in the vascular system. Advisor: Linda Lowe-Krentz, PhD. Department of Biochemistry, Lehigh University, Bethlehem, PA.
1994	<i>Research Technician.</i> Synthesis and purification of polysaccharide-protein conjugate vaccines. Connaught Laboratories Inc., Swiftwater, PA.

Teaching Experience

2020 - present	Instructor:	Graduate Pharmacology (UofU, PHTX 7221)
2019 - present	Instructor:	Systems Neuroscience (UofU, NEUSC 6050)
2019 - present	Instructor:	PHARM P2 Recitation (UofU, PHARM 6250)
2017 - present	<u>Module Leader:</u>	Integrated Pharmacotherapeutics II (UofU, PHARM 6253)
2016 - present	Instructor:	Cellular and Molecular Neuroscience (UofU, NEUSC 6040)
2015 - 2022	Instructor:	Neuroanatomy (UofU, NEUSC 6060)
2015 - 2017	Instructor:	Common Medicines (UofU, PHTX 2700)
2014 - 2015	Instructor:	Pharmacology I (UofU: PHTX 5211)
2013 - present	<u>Director:</u>	Neurophysiology Laboratory (UofU: NEUSC 6245)
2012 - present	Instructor:	Fundamentals of Pharmaceutical Sciences (UofU: PHTX 7113)
2011 - 2012	Instructor:	Methods in Pharmacology (UofU: PHTX 6600)
2012 - 2021	Lecturer:	Frontiers in Neuroscience (UofU: NEUSC 6010)
2004 - 2012	Instructor:	Neurophysiology Laboratory (UofU: NEUSC 6245)
2004 - 2012	Instructor:	Biochemical Basis of Neuropharmacology (UofU: PHTX 7270)
2001	TA:	Frontiers in Neuroscience (UofU: NEUSC 6010)
1999 - 2000	TA:	Neurophysiology Laboratory (UofU: NEUSC 6245)
1999 - 2000	TA:	Cellular Neurobiology Laboratory (UofU: BIOL 3245)

Teaching Support (funded)

2013 *Teaching Grants Program. Role: PI.* CNS Electrophysiology Equipment for Neuroscience "Boot Camp". University of Utah.

Ph.D. Supervisor

2012 - 2017: Greg Remigio, Neuroscience Program Graduate Student [MSL: Acadia Pharmaceuticals]

Teaching and Supervision (High-School and Undergraduate Students *Italicized*)

2023 - present Supervisor: Jordan Muehlberger, Postbaccalaureate graduate student
2023 - present Supervisor: Sarah Haslam, Research Assistant (HH R21)
2022 - present Supervisor: Anna Everett, Research Assistant (HH R21)
2022 - present Supervisor: *Sonia Osuna, Undergraduate Researcher*
2022 Supervisor: *Rohit Singh, Volunteer High-School Summer Student*
2022 Supervisor: *Skyla Ulrick, Volunteer High-School Summer Student*
2021 - present Supervisor: Jill Dahle, Research Assistant (HH R21)
2021 Supervisor: Qwynn Landfield, Neuroscience Program Rotation Graduate Student
2021 Supervisor: *Neve Rauscher, Volunteer High-School Summer Student*
2021 Supervisor: *Yvonne Kim, Volunteer High-School Summer Student*
2020 - present Supervisor: Samantha Pluta, PharmD P3 research student
2020 - present Supervisor: Paulina Liepinyte, PharmD P3 research student
2019 Supervisor: Carena Cornelssen, Neuroscience Program Rotation Graduate Student
2019 Supervisor: Kaliana Veros, Neuroscience Program Rotation Graduate Student
2019 Supervisor: *Manya Murali, Volunteer High-School Summer Student*
2019 Supervisor: *Keegan Gilbert, Volunteer High-School Summer Student*
2019 Supervisor: *Ashley Bates, Volunteer High-School Summer Student*
2018 Supervisor: Nguyen Pham, Neuroscience Program Rotation Graduate Student
2018 Supervisor: *Eliza Heufner, Volunteer High-School Summer Student*
2018 Supervisor: *Jack Marshall, Volunteer High-School Summer Student*
2017 - present Supervisor: Tim Pruess, Research Technician, ADD Lab, University of Utah
2017 - present Supervisor: Carlos Rueda, Research Technician, ADD Lab, University of Utah
2017 Supervisor: *Lacey Woods (SUU), Undergraduate Research (SPUR)*
2017 Supervisor: *William Zimmermann, Volunteer High-School Summer Student*
2017 Supervisor: *Catherine Dowd, Volunteer High-School Summer Student [Georgetown]*
2017 Supervisor: Jenifer Einstein, Neuroscience Program Rotation Graduate Student
2017 Supervisor: Laura Ann Bell, Neuroscience Program Rotation Graduate Student
2016 - 2017 Supervisor: *Rori Phibbs, Volunteer High-School Summer Student [UofU]*
2015 - 2016 Supervisor: *Sage Heuston, Volunteer High-School Summer Student [Brandeis]*
2015 Supervisor: *Colin Helgeson, Volunteer High-School Summer Student [Gonzaga]*
2014 - 2021 Supervisor: Peggy Billingsley, Research Technician, ADD Lab, University of Utah
2014 Supervisor: *Evie Greta Allport, Volunteer High-School Summer Student*
2014 Supervisor: *Rachel Sweeney (University of Pennsylvania), UofU SURF program*
2013 Supervisor: Genevieve Smith, Neuroscience Program Rotation Graduate Student
2013 Supervisor: Anthony Iuso, Neuroscience Program Rotation Graduate Student
2013 Supervisor: Rishi Alluri, Neuroscience Program Rotation Graduate Student
2012 - 2017 Supervisor: Greg Remigio, Neuroscience Program Graduate Student
2010 - present Supervisor: Jerry Saunders, Research Technician, ADD Lab, University of Utah

2009	Supervisor:	Christopher P. Palmer (Ithaca College), Summer Intern, Cephalon Inc.
2008 - 2009	Supervisor:	Val R. Marcy, Research Scientist I, Cephalon Inc.
2007	Supervisor:	Christine Roden (University of Pittsburgh), Summer Intern, Cephalon Inc.
2006	Supervisor:	Molly DuBray, Neuroscience Program Rotation Graduate Student
2005 - 2007	Co-Supervisor:	Alex Dalpé-Charron, Research Technician, Wilcox Lab
2005 - 2007	Writing Editor:	Graduate Students, White and Wilcox Labs
2004	Tutor:	Graduate Students, Systems Neuroscience (UofU: NEUSC 6050)

Thesis Committees

2021 - present:	Reilley Falter	Department of Neurobiology and Anatomy
2022 - present:	Erianna Basgal	Department of Neurobiology and Anatomy
2022 - present:	Allie White	Neuroscience Program
2021 - present:	Qwynn Landfield	Neuroscience Program
2021 - 2023:	Min-Jee Goh	PharmD/PhD Program
2021 - 2023:	Joseph A. Kostansek IV	Creighton University
2020 - present:	Kaliana Veros	Neuroscience Program
2019 - 2023:	Segewkal Heruye	Creighton University
2019 - 2020:	Nguyen Pham	Neuroscience Program
2018 - 2021:	Anne Gibson	Neuroscience Program
2018	Luke Gangi-Wellman	Neuroscience Program (Qualifying Exam Committee)
2017 - 2019	Ryota Inagaki	Biology Department Master's Program
2017 - 2023	Laura Bell	Neuroscience Program
2017	Travis Philyaw	MB/BC Program (Qualifying Exam Committee)
2016	Glenna Wallis	MB/BC Program (Qualifying Exam Committee)
2015 - 2016:	Heidi Yi Febinger	Neuroscience Program
2015	Patrick Parker	Neuroscience Program (Qualifying Exam Committee)
2015	Kyle Jenks	Neuroscience Program (Qualifying Exam Committee)
2014 - 2015:	Kayla Chandler	Neuroscience Program
2014 - 2021:	Pablo Maldonado-Catala	Neuroscience Program
2013 - 2016:	Anthony Iuso	Neuroscience Program
2013 - 2018:	Rishi Alluri	Neuroscience Program
2013	Meredith Gibbins	Neuroscience Program (Qualifying Exam Committee)
2012 - 2017:	Greg Remigio	Neuroscience Program

Research Support (funded)

2022-2027	HHS Contract #75N95022C00007. Role: Co-Investigator (K.S. Wilcox, PI) NINDS, NIH: Title: "Screening of Investigational Compounds to Treat, Modify or Prevent Epilepsy for the NINDS Epilepsy Therapy Screening Program (ETSP)". This contract supports the conduct of preclinical pharmacological evaluations of potential therapeutic agents (typically small molecules but will also include some biologics) and referred to as ETSP investigational compounds for the treatment of epilepsy and related disorders. This contract requires the Contractor to conduct studies including, but not limited to, the following performance areas: 1) pharmacoresistant epilepsy; 2) disease modification and anti-epileptogenesis; and 3) pharmacokinetic studies. Contract amount: \$34,201,438.00 if all term options exercised.
2021-2024	R21NS125211 Role: PI. NINDS, NIH. Title: Development of a novel rodent model of hypothalamic hamartoma and epilepsy. Grant Amount: \$275,000 (direct) + \$144,375 (indirect) = \$419,375 (total) presently in no-cost extension
2019-2020	<i>Research Incentive Seed Grant Program.</i> Role: PI. Title: Development of a novel mouse model of hypothalamic hamartoma (HH). Grant Amount: \$33,750

- 2017-2018 *HOPE for Hypothalamic Hamartoma Research Grant. Role: PI.* Title: Generation of a novel rat model of hypothalamic hamartomas. Grant Amount: \$20,000
- 2016-2021 HHSN271201600048C. **Role: Co-Investigator** (K.S. Wilcox, PI) NINDS, NIH: Title: "Screening of Investigational Compounds to Treat, Modify or Prevent Epilepsy for the NINDS Epilepsy Therapy Screening Program" This contract supports the conduct of preclinical pharmacological evaluations of potential therapeutic agents (typically small molecules but will also include some biologics) and referred to as ETSP investigational compounds for the treatment of epilepsy and related disorders. This contract requires the Contractor to conduct studies including, but not limited to, the following performance areas: 1) pharmacoresistant epilepsy; 2) models of special epilepsy populations and genetic models; and 3) disease modification and anti-epileptogenesis. Contract amount: \$19,415,476 if all term options exercised (Base Period contract amount \$3,673,220)
- 2015-2016 *Center on Aging Pilot Grant Program, University of Utah. Role: PI.* Title: 5-HT6 localization and function: a prototype target for cognitive therapies. Grant amount: \$20,000
- 2012-2013 *Research Grants Program, Epilepsy Foundation. Role: PI.* Title: 5-HT6 mediated modulation of LTP and interneuron excitability in hAPP mice. Grant amount: \$50,000
- 2011-2016 HHSN271201100029C. **Role: Co-Investigator** (H.S. White, PI) NINDS, NIH: Title: "Identification and Characterization of Novel Therapeutics for the Treatment and Prevention of Epilepsy and Neuroprotectants as Counter Measures (CM) to Chemical Threats" The purpose of the work is to define the anticonvulsant properties of investigational antiepileptic drugs using in vitro and in vivo models of epilepsy.
- 2005-2006 *Post-Doctoral Research Fellowship.* Epilepsy Foundation through the generous support of the American Epilepsy Society and the Milken Family Foundation. **Role: PI.** Title: Mediation and modulation of synaptic transmission by kainate receptors of the medial entorhinal cortex.

Research Contracts

- 2015 Johnson & Johnson Pharmaceutical Research / Janssen Pharmaceutical N.V. **Role: PI.**
2013 Johnson & Johnson Pharmaceutical Research / Janssen Pharmaceutical N.V. **Role: PI.**

Consultation Service

- 2022 Merck Sharp & Dohme LLC

Patents

Julie Ruth Korenberg, Karen Sue Wilcox, **Peter Jeffrey West**, Raymond Pierre Kesner. (2018) Application of 5-HT6 Receptor Antagonists for the Alleviation of Cognitive Deficits of Down Syndrome. U.S. Patent 14/681,312. Filed April 8, 2015, and Issued January 29, 2018.

Publications

1. Giangrasso DM, Veros KM, Timm MM, **West PJ**, Wilcox KS, Keefe KA. Glutamate dynamics in the dorsolateral striatum of rats with goal-directed and habitual cocaine-seeking behavior. *Front Mol Neurosci* 2023, **16**, 1160157. PMID: 37251646
2. Heruye SH, Warren TJ, IV JAK, Draves SB, Matthews SA, **West PJ**, Simeone KA, Simeone TA. Ascorbic Acid Reduces Neurotransmission, Synaptic Plasticity, and Spontaneous Hippocampal Rhythms in In Vitro Slices. *Nutrients*. 2022;14(3):613. PMID: 35276972

2. Gibson AS, **West PJ**, Keefe KA. Effects of methamphetamine-induced neurotoxicity on striatal long-term potentiation. *Psychopharmacology*. 2022;1–12. PMID: 34985532
3. **West PJ**, Thomson K, Billingsley P, Pruess T, Rueda C, Saunders GW, Smith MD, Metcalf CS, Wilcox KS. Spontaneous recurrent seizures in an intra-amygdala kainate microinjection model of temporal lobe epilepsy are differentially sensitive to antiseizure drugs. *Exp Neurol*. 2022;349:113954. PMID: 34922908
4. Pernici CD, Mensah JA, Dahle EJ, Johnson KJ, Handy L, Buxton L, Smith MD, **West PJ**, Metcalf CS, Wilcox KS. Development of an antiseizure drug screening platform for Dravet syndrome at the NINDS contract site for the Epilepsy Therapy Screening Program. *Epilepsia*. 2021;62(7):1665–1676. PMID: 34002394
5. Cohen NT, Cross JH, Arzimanoglou A, Berkovic SF, Kerrigan JF, Miller IP, Webster E, Soeby L, Cukiert A, Hesdorffer DK, Kroner BL, Saper CB, Schulze-Bonhage A, Gaillard WD, Group the HHW. Hypothalamic Hamartomas. *Neurology*. 2021;97(18):864–873. PMCID: PMC8610628
6. Thomson KE, **West PJ**, Metcalf CS, Wilcox KS. Response: Usefulness of the post-kainate spontaneous recurrent seizure model for screening for antiseizure and for neuroprotective effects. *Epilepsia*. 2021;62(5):1290–1290. PMID: 33778946
7. Metcalf CS, Vanegas F, Underwood T, Johnson K, **West PJ**, Smith MD, Wilcox KS. Screening of prototype antiseizure and anti-inflammatory compounds in the Theiler's murine encephalomyelitis virus model of epilepsy. *Epilepsia Open*. 2021; PMID: 34668659
8. Li X, Himes RA, Prosser LC, Christie CF, Watt E, Edwards SF, Metcalf CS, **West PJ**, Wilcox KS, Chan SSL, Chou CJ. Discovery of the First Vitamin K Analogue as a Potential Treatment of Pharmacoresistant Seizures. *J Med Chem*. 2020;63(11):5865–5878. PMID: 32390424
9. Thomson KE, Metcalf CS, Newell TG, Huff J, Edwards SF, **West PJ**, Wilcox KS. Evaluation of subchronic administration of antiseizure drugs in spontaneously seizing rats. *Epilepsia*. 2020;61(6):1301–1311. PMID: 32420627
10. Wilcox KS, **West PJ**, Metcalf CS. The current approach of the Epilepsy Therapy Screening Program contract site for identifying improved therapies for the treatment of pharmacoresistant seizures in epilepsy. *Neuropharmacology*. 2019 Nov 30;166:107811. PMID: 31790717
11. Umpierre AD, **West PJ**, White JA, Wilcox KS. Conditional Knock-out of mGluR5 from Astrocytes during Epilepsy Development Impairs High-Frequency Glutamate Uptake. *J Neurosci*. 2018 Nov 30;39(4):727–742. PMID: 30504280
12. Nagarajan N, Jones BW, **West PJ**, Marc R, Capecchi MR. Corticostriatal circuit defects in Hoxb8 mutant mice. *Mol Psychiatr*. 2018;23(9):1–10. PMCID: PMC5970001
13. **West PJ**, Saunders GW, Billingsley P, Smith MD, White HS, Metcalf CS, Wilcox KS. Recurrent epileptiform discharges in the medial entorhinal cortex of kainate-treated rats are differentially sensitive to antiseizure drugs. *Epilepsia*. 2018 Nov;59(11):2035–2048. PMID: 30328622
14. Remigio GJ, Loewen JL, Heuston S, Helgeson C, White HS, Wilcox KS, **West PJ**. Corneal kindled C57BL/6 mice exhibit saturated dentate gyrus long-term potentiation and associated memory deficits in the absence of overt neuron loss. *Neurobiol Dis*. 2017 Jun 15;105:221–234. PMID: 28624414
15. Metcalf CS, **West PJ**, Thomson KE, Edwards SF, Smith MD, White HS, Wilcox KS. Development and pharmacologic characterization of the rat 6 Hz model of partial seizures. *Epilepsia*. 2017 Jun;58(6):1073–1084. PMID: 28449218
16. Basu R, Duan X, Taylor MR, Martin EA, Muralidhar S, Wang Y, Gangi-Wellman L, Das SC, Yamagata M, **West PJ**, Sanes JR, Williams ME. Heterophilic Type II Cadherins Are Required for High-Magnitude Synaptic Potentiation in the Hippocampus. *Neuron*. 2017 Sep 27;96(1):160–176.e8. PMID: 28957665
17. Patel DC, Wallis G, Dahle EJ, McElroy PB, Thomson KE, Tesi RJ, Szymkowski DE, **West PJ**, Smeal RM, Patel M, Fujinami RS, White HS, Wilcox KS. Hippocampal TNF α Signaling Contributes to Seizure Generation in an Infection-Induced Mouse Model of Limbic Epilepsy. *Eneuro*. 2017 Mar;4(2):ENEURO.0105-17.2017. PMID: 28497109
18. Kaufmann D, **West PJ**, Smith MD, Yagen B, Bialer M, Devor M, White HS, Brennan KC. sec-Butylpropylacetamide (SPD), a new amide derivative of valproic acid for the treatment of neuropathic and inflammatory pain. *Pharmacol Res*. 2016 Nov 24;117:129–139. PMID: 27890817

19. Barker-Haliski ML, Johnson K, Billingsley P, Huff J, Handy LJ, Khaleel R, Lu Z, Mau MJ, Pruess TH, Rueda C, Saunders G, Underwood TK, Vanegas F, Smith MD, **West PJ**, Wilcox KS. Validation of a Preclinical Drug Screening Platform for Pharmacoresistant Epilepsy. *Neurochem Res*. 2017 Mar 16;42(7):1904–1918. PMID: 28303498
20. Walls AB, Flynn SP, **West PJ**, Müller MS, Bak LK, Bulaj G, Schousboe A, White HS. The anticonvulsant action of the galanin receptor agonist NAX-5055 involves modulation of both excitatory- and inhibitory neurotransmission. *Epilepsy Res*. 2016 Mar;121:55–63. PMID: 26894875
21. **West PJ**, Saunders GW, Remigio GJ, Wilcox KS, White HS. Antiseizure drugs differentially modulate theta-burst induced long-term potentiation in C57BL/6 mice. *Epilepsia*. 2014 Feb;55(2):214–223. PMID: PMC3945279
22. Gee JM, Smith NA, Fernandez FR, Economo MN, Brunert D, Rothermel M, Morris SC, Talbot A, Palumbos S, Ichida JM, Shepherd JD, **West PJ**, Wachowiak M, Capecchi MR, Wilcox KS, White JA, Tvrdik P. Imaging Activity in Neurons and Glia with a Polr2a-Based and Cre-Dependent GCaMP5G-IRES-tdTomato Reporter Mouse. *Neuron*. 2014 Sep;83(5):1058–1072. PMID: PMC4156920
23. Umpierre AD, Remigio GJ, Dahle EJ, Bradford K, Alex AB, Smith MD, **West PJ**, White HS, Wilcox KS. Impaired cognitive ability and anxiety-like behavior following acute seizures in the Theiler's virus model of temporal lobe epilepsy. *Neurobiol Dis*. 2014 Apr;64:98–106. PMID: PMC4353639
24. **West PJ**, Marcy VR, Marino MJ, Schaffhauser H. Activation of the 5-HT6 receptor attenuates long-term potentiation and facilitates GABAergic neurotransmission in rat hippocampus. *Neuroscience*. 2009 Dec 1;164(2):692–701. PMID: 19660530
25. **West PJ**, Dalpé-Charron A, Wilcox KS. Differential contribution of kainate receptors to excitatory postsynaptic currents in superficial layer neurons of the rat medial entorhinal cortex. *Neuroscience*. 2007 May 25;146(3):1000–1012. PMID: 17395391
26. **West PJ**, Bulaj G, Yoshikami D. Effects of δ -Conotoxins PVIA and SVIE on Sodium Channels in the Amphibian Sympathetic Nervous System. *J Neurophysiol* [Internet]. 2005 Dec 1;94(6):3916–3924. Available from: <http://jn.physiology.org/cgi/content/full/94/6/3916> PMID: 16107523
27. Bulaj G, **West PJ**, Garrett JE, Watkins M, Zhang M-M, Norton RS, Smith BJ, Yoshikami D, Olivera BM. Novel Conotoxins from *Conus striatus* and *Conus kinoshitai* Selectively Block TTX-Resistant Sodium Channels \dagger . *Biochemistry-us*. 2005 May 17;44(19):7259–7265. PMID: 15882064
28. Keizer DW, **West PJ**, Lee EF, Yoshikami D, Olivera BM, Bulaj G, Norton RS. Structural Basis for Tetrodotoxin-resistant Sodium Channel Binding by μ -Conotoxin SmIIIA*. *J Biol Chem*. 2003 Nov 21;278(47):46805–46813. PMID: 12970353
29. **West PJ**, Bulaj G, Garrett JE, Olivera BM, Yoshikami D. μ -Conotoxin SmIIIA, a Potent Inhibitor of Tetrodotoxin-Resistant Sodium Channels in Amphibian Sympathetic and Sensory Neurons \dagger . *Biochemistry-us*. 2002 Dec 24;41(51):15388–15393. PMID: 12484778
30. Bulaj G, DeLaCruz R, Azimi-Zonooz A, **West P**, Watkins M, Yoshikami D, Olivera BM. δ -Conotoxin Structure/Function through a Cladistic Analysis \dagger . *Biochemistry-us*. 2001 Nov 6;40(44):13201–13208. PMID: 11683628
31. Craig AG, Zafaralla G, Cruz LJ, Santos AD, Hillyard DR, Dykert J, Rivier JE, Gray WR, Imperial J, DelaCruz RG, Sporning A, Terlau H, **West PJ**, Yoshikami D, Olivera BM. An O-glycosylated neuroexcitatory conus peptide. *Biochemistry*. 1998 Nov 17;37(46):16019–16025. PMID: 9819194

Review Articles and Book Chapters

1. Metcalf CS, **West PJ**, Edwards SF, Wilcox KS. Chapter TBD. New Models for Assessment of Antiseizure Activity. In Jasper's Basic Mechanisms of Epilepsy, Fifth Edition. Editors: Noebels JL, Avoli M, Rogawski MA, Vezzanu A, and Delgado-Escueta AV. *In Preparation*.
2. Cohen NT, Cross JH, Arzimanoglou A, Berkovic SF, Kerrigan JF, Miller IP, Webster E, Soeby L, Cukiert A, Hesdorffer DK, Kroner BL, Saper CB, Schulze-Bonhage A, Gaillard WD, Group the HHW. Hypothalamic Hamartomas. *Neurology*. 2021;97(18):864–873. PMID: PMC8610628

3. Wilcox KS, **West PJ**, Dichter MA. Chapter 22: Excitatory Synaptic Transmission. In *Epilepsy: A Comprehensive Textbook*, Second Edition. Engel J, Pedley TA, Aicardi J, Dichter MA, Moshé SL, ed. Lippincott Williams & Wilkins, 2007, Volume 1, pp. 233-244

Speaking Invitations

- 2023 Cognitive and Behavioral Comorbidities in Epilepsy: The Scenic Route. Pharmacology and Toxicology Department Seminar, University of Montana. June 6, 2023.
- 2019 A Translational Hypothalamic Hamartoma Rodent Model. 4th International Hypothalamic Hamartoma Symposium. Washington DC. September 14, 2019.
- 2018 Cognitive and Behavioral Comorbidities in Epilepsy: The Scenic Route. Biology Department Seminar, Swarthmore College. December 6, 2018.
- 2017 The 5-HT₆ receptor: a next-generation drug target for the treatment of cognitive dysfunction. Division of Geriatrics and the VASLC GRECC Geriatrics Research Update Conference. University of Utah. Salt Lake City, UT. February 14, 2017.
- 2015 Implementation of novel models to address the unmet medical needs in epilepsy treatment. *Experimental Biology 2015: ASPET annual meeting*. Boston, MA. Monday, March 30, 2015
- 2014 Do Antiseizure Drugs Affect Learning and Memory? Epilepsy Alliance of Utah Education Conference. Jon and Karen Huntsman Education Center - LDS Hospital - SLC, UT. Saturday, October 11, 2014
- 2010 LTP and the Pharmacology of Cognition. Department of Pharmacology and Toxicology Seminar Series. University of Utah, Salt Lake City, UT. Monday, August 30, 2010.
- 2009 Conotoxin Modulation of Voltage-Gated Sodium Channels. Biology Department Seminar Series. Utah State University, Logan, UT. Tuesday, October 27, 2009.
- 2007 From Snails to Seizures: The Electrophysiology of Natural Products and Injury Prone Neurons. Cephalon, Inc., West Chester, PA. January 5, 2007.
- 2006 Cone Snail Venom Peptides: 50 Million Years of Neuropharmacology. Department of Biology Seminar Series. Dickinson College, Carlisle, PA. Monday, November 20, 2006
- 2006 Kainate receptors of the rat medial entorhinal cortex. Special Interest Group: The Varied Roles of Kainate Receptors in Epilepsy. American Epilepsy Society Meeting: San Diego, CA
- 2005 Whole-cell voltage clamp techniques in drug discovery and physiological characterizations. Molecular Devices Corporation, Sunnyvale, CA. April 8, 2005.

Selected Abstracts & Posters

1. **P. West**, P. Billingsley, T. Pruess, C. Rueda, G. Saunders, M. Smith, C. Metcalf, K. Wilcox. Characterization of an Antiseizure Drug Screening Platform Using an Intra-Amygdala Kainate Microinjection Model of Temporal Lobe Epilepsy in the NINDS-Funded Epilepsy Therapy Screening Program. *American Epilepsy Society Meeting: Baltimore MD*. 2019.
2. **P. West**, L. Woods, C. Dowd, R. Phibbs, W. Zimmermann, P. Billingsley, T. Pruess, C. Rueda, M. Smith, C. Metcalf, K. Wilcox. The effects of spontaneous recurrent seizures on dentate gyrus mediated learning, memory, and synaptic plasticity. *American Epilepsy Society Meeting: New Orleans, LA*. 2018.
3. **P. West**, G. Saunders, P. Billingsley, M. Smith, C. Metcalf, H. White, K. Wilcox. Spontaneous Electrographic Bursting in the Medial Entorhinal Cortex of Kainate-Lesioned Rats Is Refractory to Multiple Classes of Anti-Seizure Drugs. *American Epilepsy Society Meeting: Houston, TX*, 2016.
4. K. Thomson, **P. West**, T. Newell, C. Metcalf, K. Wilcox. Rapid Screening for Antiseizure Therapies Utilizing Repeated Dosing in Chronically Epileptic Rats. *American Epilepsy Society Meeting: Houston, TX*, 2016.

5. G. Remigio, J. Loewen, S. Heuston, C. Helgeson, K. Wilcox, **P. West**. Corneal Kindled Mice Exhibit DG- Dependent Memory Deficits and Hyperexcitability in the Absence of Overt Hippocampal Neuron Loss. American Epilepsy Society Meeting: Houston, TX, 2016.
6. C. Metcalf, **P. West**, C. Rueda, K. Thomson, Z. Lu, M. Smith, K. Wilcox. Development and Pharmacologic Characterization of the Rat 6 Hz Model. American Epilepsy Society Meeting: Houston, TX, 2016.
7. Remigio GJ, **West PJ**. 5-HT6 receptor ligands modulate seizure thresholds and inhibitory synaptic transmission in the dentate gyrus. Center on Aging: 10th Annual Retreat, Salt Lake City, UT. April 14, 2016. **Best Student Poster in Biological Sciences**.
8. Remigio GJ, **West PJ**. 5-HT6 receptor ligands modulate seizure thresholds and inhibitory synaptic transmission in the dentate gyrus. Snowbird Symposium. Salt Lake City, UT. October 30, 2015. **2nd Place Award: SfN Intermountain Chapter Poster Session**.
9. Remigio GJ and **West PJ**. 5-HT6 receptor effects on memory, seizures, and synaptic transmission. 670.10: Society for Neuroscience Meeting: Chicago, IL. 2015.
10. Remigio GJ, Saunders GW, **West PJ**. 5-HT6 receptors modulate inhibitory synaptic transmission in the dentate gyrus. Alzheimer's Drug Discovery Foundation – Drug Discovery for Neurodegeneration Conference. February 2-4, 2014.

Professional Activities and University Service

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|--------------|---|
| 2023 | Co-Organizer: The Park City Epilepsy Meeting: <i>Cutting Edge Approaches to Transform Epilepsy Therapy</i> . October 15-17, 2023. Park City, UT. |
| 2019 | Co-Organizer: The Park City Epilepsy Meeting: <i>Cutting Edge Approaches to Transform Epilepsy Therapy</i> . October 6-8, 2019. Park City, UT. |
| 2015 | Co-Chair, <i>New Therapies for an Old Problem: The NINDS-Sponsored Anticonvulsant Screening Program Symposium</i> . ASPET 2015 annual meeting, Boston, MA |
| 2015 | Co-Organizer: The ADD Program Symposium: <i>Therapy Development in the Era of Team Science & Big Data: What Will the Future Bring to the Patient with Epilepsy?</i> May 17-20, 2015. Park City, UT. |
| 2022-present | Senator: University of Utah Academic Senate |

Peer Reviewer for Journals

Epilepsia, Epilepsy Research, Journal of Neurophysiology, Metabolic Brain Disease, Neurochemical Research, Neurotherapeutics, Naunyn-Schmiedeberg's Archives of Pharmacology, PLOS one, The Lancet Neurobiology, Brain Science

Peer Reviewer for Funding Agencies

NIH / NINDS F01A Brain Disorders and Related Neuroscience Fellowships study section, American Epilepsy Society (AES), Alzheimer's Association, Citizens United for Research in Epilepsy (CURE), University of Utah College of Pharmacy Seed Grants, University of Utah Center on Ageing

Honors & Awards

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|------|---|
| 1997 | Harry M. Ullmann Chemistry Prize (highest GPA senior in Chemistry), Lehigh University |
| 1997 | American Chemical Society Award (outstanding senior in Chemistry), Lehigh University |
| 1997 | Departmental Honors in Biological Sciences, Lehigh University |

1997 Graduated with Highest Honors, Lehigh University
1996 Junior Prize in Arts and Sciences (highest GPA in the junior class), Lehigh University
1996 William H. Chandler Prize (highest GPA junior in Chemistry), Lehigh University
1995 Alpha Epsilon Delta, Lehigh University
1994 The Gilmore Pre-Medical Scholarship, Lehigh University
1994 The Class of 1952 Memorial Scholarship, Lehigh University
1994 Phi Eta Sigma, Lehigh University

Programs and Committees, University of Utah

2020-2022 Center on Ageing Steering Committee, UofU school of Medicine
2015-2017 Social Media Task Force: Department of Pharmacology and Toxicology
2001-2002 Student Representative: Neuroscience Program Directorate
2000-2001 Student Representative: Neuroscience Program Curriculum Committee

Volunteer Experience

2013 - 2017: Open Classroom, SLC UT: Neuroscience Mini-courses

1999-2018: Utah Brain Awareness Week
 2000-2001: Chairperson
 2002: Co-Chairperson

Scientific Society Memberships

2014-present American Society for Pharmacology and Experimental Therapeutics (ASPET)
2003-present American Epilepsy Society (AES)
1998-present Society for Neuroscience (SFN)

Primary References

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