

David B. Wheeler, M.D., Ph.D., FAAN, FAES, FAHA

Wyoming Neurologic Associates, LLC

2546 East 2nd Street, Suite 600
Casper, WY 82609

T 307-265-4343
F 307-234-6339

dwheeler@wyoneuro.com
www.wyoneuro.com

EDUCATION

- M.D., Stanford University School of Medicine, Stanford, CA (9/91-6/00)
- Ph.D., Neurosciences Program, *Identification of Voltage-Gated Calcium Channels Involved in Regulation of Excitatory Synaptic Transmission in Rat Hippocampus*, Research Supervisor: Prof. Richard W. Tsien, Stanford University School of Medicine, Stanford, CA (1/93-1/98)
- M.Sc., Faculty of Physiological Sciences, *In Vivo Monitoring of Striatal Neurochemistry: Neurotransmitter Interactions During Behaviour*, Research Supervisor: Dr. Marianne Fillenz, University of Oxford, Oxford, UK (10/89-9/91)
- B.A., with High Honors, Zoological Sciences (Chemistry Minor), University of Montana, Missoula, MT (9/84-6/89)

POSTGRADUATE TRAINING

- Fellow, Clinical Neurophysiology (EEG, Epilepsy and Evoked Potentials), Division of EEG and Epilepsy, Department of Neurology, Brigham & Women's Hospital, Harvard Medical School, Boston, MA (7/04-6/05)
- Resident, Neurology, Partners Program, Massachusetts General and Brigham & Women's Hospitals, Harvard Medical School, Boston, MA (7/01-6/04)
- Intern, Internal Medicine, Department of Medicine, Brigham & Women's and Faulkner Hospitals, Harvard Medical School, Boston, MA (7/00-6/01)

PROFESSIONAL POSITIONS HELD

- Founder, President & Managing Neurologist, Wyoming Neurologic Associates (2006-)
- Co-Founder, Frontier Neuro Health (2014-2018)
- Neurologist, Central Wyoming Neurology (2005-2006)

HOSPITAL POSITIONS HELD

- Staff Neurologist, Banner Wyoming Medical Center (2005-)
- Consulting Neurologist (TeleStroke), Weston County Health Services (2020-)
- Consulting Neurologist (TeleStroke), Johnson County Healthcare Center (2020-)
- Consulting Neurologist (TeleStroke) Cody Regional Health-West Park Hospital (2020-)
- Consulting Neurologist, SageWest-Riverton (2020-)
- Consulting Neurologist, SageWest-Lander (2020-)
- Consulting Neurologist (TeleStroke), Memorial Hospital of Carbon County (2019-)
- Consulting Neurologist, Campbell County Memorial Hospital (2019-)
- Consulting Neurologist (TeleStroke), Hot Springs County Memorial Hospital (2019-)
- Consulting Neurologist (TeleStroke), Sheridan Memorial Hospital (2019-)
- Consulting Neurologist, Billings Clinic (2012-2020)
- Consulting Neurologist, Elkhorn Valley Rehabilitation Hospital (2008-)
- Consulting Neurologist, Memorial Hospital of Converse County (2008-2013, 2014-)

BOARD CERTIFICATION

- American Board of Psychiatry and Neurology: Neurology (2005, 2015-)
- American Board of Psychiatry and Neurology: Clinical Neurophysiology (2007, 2017-)
- American Board of Psychiatry and Neurology: Epilepsy (2016-)
- National Board of Physicians and Surgeons: Neurology (2015-)
- National Board of Physicians and Surgeons: Clinical Neurophysiology (2015-)
- National Board of Physicians and Surgeons: Epilepsy (2016-)

CURRENT LICENSE TO PRACTICE

- Wyoming Board of Medicine (2004-)
- Montana Board of Medicine (2012-)

SPECIAL LOCAL RESPONSIBILITIES

- Wyoming Telehealth Consortium, Steering Committee At-Large Member, (2021-)
- Physician Advisory Council for Strategic Planning, Wyoming Medical Center (2019-2020)
- Telehealth Advisory Council, Wyoming Medical Center (2018-2020)
- Northwest Regional Telehealth Resource Center, Board Member (2016-2019)
- Joint Operations Board, Wyoming Medical Center, (2015-2016)
- Frontiers in Wyoming Medicine, Program Director (2015, 2016)
- Wyoming Medical Center Board of Directors
 - Vice-Chairman (2015-2016)
 - Secretary (2013-2015)
 - Board Member (2012-2016)
- Wyoming Dementia Care
 - Board Member (2011-)
 - Chairman (2015-2017)
 - Vice-Chairman (2013-2015)
- Wyoming Health Information Organization, Board Member (2012-2015)
- Anticoagulation Committee, Wyoming Medical Center (2009-)
- Education Committee, Wyoming Medical Center (2009-2014)
- Chief of Staff, Wyoming Medical Center (2009-2011)
- Chairman, Wyoming Neuroscience and Spine Institute (2008-2011)
- Vice President of the Medical Staff, Elkhorn Valley Rehabilitation Hospital (2008-)
- Medical Director, Wyoming Stroke Enhancement Project (TeleStroke) (2008-2010)
- Medical Director, Banner Wyoming Medical Center Stroke Program, ASA/AHA Gold Plus Award, Target Stroke Honor Roll Elite Plus, Thrombectomy Capable Primary Stroke Center Certified by The Joint Commission (2006-)
- Medical Director, Banner Wyoming Epilepsy Center, Level 3 Certified, National Association of Epilepsy Centers (2006-)

PROFESSIONAL ORGANIZATIONS

- American Medical Association
- American Heart Association,
 - American Stroke Association Advisory Committee (2020-)
 - Elected Fellow Member (2019)
 - SouthWest Region Board of Directors (2011-2015, 2017-)
 - President (2020-)

- SouthWest Region Stroke Advisory Committee (2011-)
 - Chairman (2014-2015)
- SouthWest Region Research Committee (2014-2016)
- National Professional Education Committee (2016-2018)
- Pacific Mountain Affiliate Board of Directors, (2009-2011)
- American Epilepsy Society
 - Elected Fellow Member (2016)
 - Corporate Affairs Committee (2013-2015)
 - Medical Education Committee (2014-2018)
- American Academy of Neurology
 - Elected Fellow Member (2015)
- National Association of Epilepsy Centers
 - Board Nominating Committee (2015)
- American Association of Neuromuscular & Electrodiagnostic Medicine
 - State Liaison Program Volunteer (2019)
- Wyoming Medical Society
 - Past-President (2021-)
 - President (2019-2021)
 - Vice President (2018-2019)
 - Secretary (2017-2018)
 - Open Trustee (2014-2017)
- Wyoming Neurological Society
 - Vice President (2006-2014, 2015-)
 - Treasurer (2014-2015)
- Natrona County Medical Society

FACULTY POSITIONS HELD

- University of Washington, School of Medicine, Department of Neurology,
 - Clinical Assistant Professor (2015-)
 - Clinical Instructor (2011-2015)
- University of Wyoming Residency Program in Family Practice/Neurology
 - Adjunct Faculty (2006-)
- Rocky Vista University College of Osteopathic Medicine
 - Clinical Assistant Professor (2018-)
- Master of Physician Assistant Studies Program, Rocky Mountain College
 - Clinical Adjunct Professor (2014-)

HONORS

- American Heart Association, Physician of the Year (2019)
- Wyoming Medical Center, Physician of the Year (2010)
- Howard Hughes Medical Institute Pre-Doctoral Fellowship, Stanford University (1993-1998)
- Rhodes Scholarship, Montana and Magdalen College, University of Oxford (1989-1991)
- Watkins Scholarship for Senior Project, University of Montana (1988-1989)
- University of Montana Presidential Award of Merit, University of Montana (1988)
- Silent Sentinel Award for Academic Excellence, University of Montana (1988)

PUBLICATIONS

Papers

- Zetterström, T., Wheeler, D.B., Boutelle, M.G. and Fillenz, M. (1991). Striatal ascorbate and its relationship to dopamine receptor stimulation and motor activity. *Eur. J. Neurosci.* **3**(10):940-946.
- Wheeler, D.B., Randall, A. and Tsien, R.W. (1994). Roles of N-type and Q-type Ca²⁺ channels in supporting hippocampal synaptic transmission. *Science* **264**:107-111.
- Wheeler, D.B., Tsien, R.W. and Randall, A. (1994). Identification of calcium channels that control neurosecretion. *Science* **266**:830-831.
- Wheeler, D., Boutelle, M.G. and Fillenz, M. (1995). The role of N-methyl-D-aspartate receptors in the regulation of physiologically released dopamine. *Neuroscience* **65**:767-774.
- Wheeler, D.B., Randall, A. and Tsien, R.W. (1996). Changes in action potential duration alter reliance of excitatory synaptic transmission on multiple types of Ca²⁺ channels in rat hippocampus. *J. Neurosci.* **16**:2226-2237.
- Donohoe, M.T., Kravitz, R.L., Wheeler, D.B., Chandra, R., Chen, A. and Humphries, N. (1999) Reasons for outpatient referrals from generalists to specialists. *J. Gen. Intern. Med.* **14**(5):281-286.
- Jun, K., Smith, S.M., Piedras-Renteria, E., Wheeler, D.B., Lee, S.B., Lee, T.G., Scheller, R.H., Tsien, R.W. and Shin, H.-S. (1999). Ablation of P/Q-type calcium channels currents and progressive, fatal ataxia in mice lacking the $\alpha 1_A$ subunit. *Proc. Natl. Acad. Sci. U.S.A.* **96**(26):15245-15250.

Chapters & Reviews

- Wheeler, D.B., Sather, W.A., Randall, A. and Tsien, R.W. (1994). Distinctive properties of a neuronal calcium channel and its contribution to excitatory transmission in the CNS. *Adv. Second Messenger Phosphoprotein Res.* **29**, Molecular and Cellular Mechanisms of Neurotransmitter Release. L. Stjärne, P. Greengard, S. Grillner, T. Hökfelt and D. Ottoson (Eds.), Raven Press, New York. pp. 155-172.
- Wheeler, D.B., Randall, A., Sather, W.A. and Tsien, R.W. (1995). Neuronal calcium channels encoded by the $\alpha 1_A$ subunit and their contribution to excitatory synaptic transmission in the CNS. *Prog. Brain Res.* **105**, Gene Expression in the Central Nervous System. A.C.H. Yu, L.F. Eng, K.J. McMahan, H. Schulman and A. Stadlin (Eds.), Elsevier Science BV, Amsterdam. pp. 65-78.
- Tsien, R.W. and Wheeler, D.B. (1999). Voltage-gated calcium channels. In: *Calcium as a Cellular Regulator*. E. Carafoli and C.B. Klee (Eds.), Oxford University Press, New York. pp 171-199.
- Bergsman, J.B., Wheeler, D.B. and Tsien, R.W. (2000). Classification and function of voltage-gated calcium channels. In: *Pharmacology of Ionic Channel Function: Activators and Inhibitors (Handbook of Experimental Pharmacology, Volume 147)*. M. Endo, Y. Kurachi and M. Mishina (Eds.), Springer-Verlag, Heidelberg. pp 55-83.

Abstracts

- Boutelle, M.G., Wheeler, D.B. and Fillenz, M. (1990). Effects of ketamine on basal and tail pinch-stimulated levels of extracellular brain ascorbic acid. *Eur. J. Pharmacol.* **183**(3):965- 966.
- Wheeler, D.B., Boutelle, M.G., Zetterström, T. and Fillenz, M. (1990). Effects of apomorphine on extracellular brain ascorbic acid. *Eur. J. Pharmacol.* **183**(2):431.
- Fillenz, M., Wheeler, D.B. and Boutelle, M.G. (1991). Regulation of the physiological release of dopamine. In: *Monitoring Molecules in Neuroscience. Proceedings of the Fifth International Congress on In Vivo Methods*. H. Rollema, B. Westerink and W. J. Drifhout, eds. University Centre for Pharmacy, Groningen, Noordwijkkerhout, pp. 315-316.

- Wheeler, D.B. and Fillenz, M. (1991). Local N-methyl-D-aspartate receptors modulate basal and tail pinch-stimulated release of dopamine in rat striatum. *Eur. J. Neurosci.* **3**(Suppl. 4):167.
- Malgaroli, A., Wheeler, D.B., Naldi, E., Ciardo, A., Bergamaschi, A. and Tsien, R.W. (1993). A presynaptic alteration supporting LTP in hippocampal neurons: contrast with effect of α -latrotoxin. *Soc. Neurosci. Abstr.* **19**(2):911.
- Randall, A.D., Wheeler, D.B. and Tsien, R.W. (1993). Modulation of Q-type Ca^{2+} channels and Q-type Ca^{2+} channel-mediated synaptic transmission by metabotropic and other G-protein linked receptors. *Funct. Neurol.* **8**(Suppl. 4):44-45.
- Wheeler, D.B. Tsien, R.W. and Randall, A.D. (1993). A calcium channel with novel pharmacology supports synaptic transmission and plasticity in the hippocampus. *Soc. Neurosci. Abstr.* **19**(2):909.
- Wheeler, D.B., Randall, A.D. and Tsien, R.W. (1994). The basis of concerted actions of multiple Ca^{2+} channel types in excitatory synaptic transmission in area CA1 of rat hippocampal slice *in vitro*. *J. Physiol.* **403P**:30.
- Wheeler, D.B., Randall, A. and Tsien, R.W. (1995). Concerted actions of multiple Ca^{2+} channel types in excitatory synaptic transmission. *Soc. Neurosci. Abstr.* **21**(3):1754.
- Wheeler, D.B. and Tsien, R.W. (1996). Mechanisms of long-term potentiation induced by elevated extracellular calcium. *Soc. Neurosci. Abstr.* **22**(2):1509.
- Jun, K., Smith, S.M., Piedras-Renteria, E., Wheeler, D.B., Lee, S.B., Scheller, R.H., Tsien, R.W. and Shin, H.-S. (1999). Knockout of the Ca^{2+} channel α_{1A} subunit ablates P- and Q-type currents and causes generalized dystonia. *Soc. Neurosci. Abstr.* **25**(1):195.
- Mermelstein, P.G., Graef, I.A., Pitt, G.S., Wheeler, D.B., Dasgupta, N., Mukai, T., Crabtree, G.R. and Tsien, R.W. (1999). Calcineurin and GSK-3 β regulate NF- $\text{Atc}4$ -dependent gene transcription in hippocampal neurons. *Soc. Neurosci. Abstr.* **25**(1):469.

CLINICAL TRIALS

- Long-term, prospective, observational, multinational, parallel-cohort study monitoring safety in patients with MS newly started with fingolimod once daily or treated with another approved disease-modifying therapy Novartis Protocol CFTY720D2403 (2012-2020)
- A two-year observational study to evaluate the safety profile of fingolimod in patients with multiple sclerosis who switch from natalizumab to fingolimod Novartis Protocol CFTY720D2405 (2013-2017)
- A randomized, double-blind, placebo-controlled, multicenter, parallel-group study to evaluate the efficacy and safety of brivaracetam in subjects (≥ 16 to 80 years old) with partial onset seizures UCB Biosciences GmbH protocol N01358 (2013-2015)
- An open-label, multicenter, follow-up study to evaluate the long-term safety and efficacy of brivaracetam used as adjunctive treatment in subjects aged 16 years or older with epilepsy UCB Biosciences GmbH Protocol N01379 (2013-2015)
- A Phase 3, double blind, double-dummy, randomized, positive-controlled, multicentre study comparing the efficacy and safety of Lacosamide to controlled released Carbamazepine in subjects newly or recently diagnosed with epilepsy and experiencing partial-onset or generalized tonic-clonic seizures UCB Biosciences GmbH Protocol SP0993 (2013-2014)
- A multicenter, double-blind, double-dummy follow-up study evaluating the long-term safety of lacosamide (200 to 600mg/day) in comparison with carbamazepine (400 to 1200mg/day), used as monotherapy in patients with partial-onset or generalized tonic-clonic seizures (≥ 16 years of age) coming from the SP0993 study UCB Biosciences GmbH Protocol SP0994 (2013-2014)

BIOGRAPHY

I grew up in Missoula, Montana. As the son of educators, I developed a love of learning and passion for making a difference. I became distracted as a teenager and dropped out of high school at 16. I spent the next four years working in a restaurant and learning how to take care of myself. I met JoAnne when we were 18 and a year later decided to get my GED and follow her to college. I attended the University of Montana with plans to become a wildlife biologist.

I did well in school and discovered a strong interest in cellular physiology which led me to contemplate a career in medical research. I also became active in several political and social movements during my undergraduate years reaffirming my drive to make the world better through my actions. As a result of these endeavors and the strong support of my mentors I was successful in applying for a Rhodes scholarship.

I spent two importantly formative years at Oxford University completing a Masters in Physiology studying neurotransmitter systems in the basal ganglia. While in Oxford I also developed many important relationships with very intelligent and highly motivated people whose examples spurred me to strive even harder in my career.

After the first year at Oxford JoAnne and I got married and spent an interesting year together abroad. We then moved to Stanford where I spent 9 years obtaining the MD and PhD in Neurosciences. My research focused on the role of calcium channels in controlling synaptic function in the hippocampus; processes critical in both mechanisms of learning and epilepsy thereby forming the basis of what would become my major neurologic interests.

During my final years of medical school, I found that I greatly enjoyed patient interactions and decided to start moving away from bench research toward a career in clinical medicine. We left the Bay Area in 2000 moved on to Boston where I spent 5 years in hospitals associated with Harvard Medical School. I received outstanding clinical training in general medicine, neurology and epilepsy. I also had very extensive experience in inpatient stroke care.

Central to my decision to move to Casper was the opportunity to help develop much needed neurology programs from the ground up. I have been very busy in the years since we came to Wyoming. I have retained my broad neurologic interests and have run a comprehensive and growing general neurology and neuro-health practice. I have established the Wyoming Epilepsy Center which provides comprehensive care to the thousands of Wyomingites affected by seizures. I have also been a leader in the development of our nationally recognized Primary Stroke Center. I am keenly interested in systems of care tailored to our rural environment especially utilizing telehealth technologies. I am an active participant in local, state and national programs devoted to system improvement and delivery of excellent care. I have also been very active in hospital leadership positions and enjoy a variety of opportunities to teach nurses, residents, medical and PA students in the office and at the hospital.

We love living in Casper. It was a terrific community for raising our kids and getting outdoors, camping or hiking every chance we get. I also enjoy golf, riding motorcycles, driving sports cars, eating and preparing good food and drinking fine wine.

