Stephen Francis Traynelis

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Education

1984	West Virginia University, Morgantown, WV	B.S. Chemistry
1988	University of North Carolina, Chapel Hill, NC	Ph.D. Pharmacology

Research Training and Job Experience

1989-1991	University College London, London, UK. Postdoctoral Research with Prof. Stuart Cull-Candy, FRS, Department of Pharmacology
1992-1994	Salk Institute, La Jolla, CA. Postdoctoral Research with Prof. Stephen Heinemann, Director of the Molecular Neurobiology Laboratory
1994-2000	Assistant Professor, Department of Pharmacology, Emory University
2000-2006	Associate Professor, Department of Pharmacology, Emory University
2006-	Professor, Department of Pharmacology, Emory University

Scholarships, Awards, and Honors

2017	2nd Millipub Club publication, Emory University (faculty with papers having >1000 citations)
2015-	The Faculty of 1000
2015	The Emory 1%
2014	Elected a Fellow of the American Association for the Advancement of Science (AAAS)
2010	Founding member of Millipub Club, Emory University (faculty with papers having >1000 citations)
2010	One in One Hundred Mentors, Office of Postdoctoral Education, Emory School of Medicine
2008	Teaching Excellence Award, Dept Pharmacology, Emory School of Medicine
2007	Javits Award from NINDS
2007	1st Annual Distinguished Alumni Award in Chemistry, West Virginia University
1997	President, Atlanta Chapter, Society for Neuroscience
1995	John Merck Scholar
1984	B.S. Chemistry, *Summa Cum Laude*
1980	John Moore Chemistry Scholarship, West Virginia University (4 years)
1980	West Virginia University Achievement Scholarship (4 years)
1984	National Honor Societies: Phi Beta Kappa, Phi Kappa Phi, Golden Key

National Committees and Service: Manuscript Reviewer

Editorial Board, Critical Reviews in Neurobiology (2003-2008)
Editorial Board, Open Pharmacology Journal (2007-2012)
Editorial Board, Molecular Brain (2007-2012)
Editorial Board, Molecular Pharmacology (1996-99, 2006-2016)
Editorial Board, Channels (2012-present)
Associate Editor, Molecular Pharmacology (2008-2011)
Editor-in-Chief, Molecular Pharmacology (2012-2016)
Reviewer for: ACS Chemical Biology, American Journal of Physiology, Biochemistry, British Journal of Pharmacology, eLife, European Journal of Neuroscience, Experimental Eye Research, Glia, Journal of Biological Chemistry, Journal of Cell Science, Journal of Medicinal Chemistry, Journal of Neurobiology, Journal of Neurochemistry, Journal of Neurophysiology, Journal of Neuroscience, Journal of Neuroscience Methods, Journal of Neuroscience Research, Journal of Neurological Sciences, Journal of Physiology, Molecular Brain, Molecular Pharmacology, Neuron, NeuroReport, Neuropharmacology, Neuroscience, Neuroscience Lettters, Nature, Nature Communications, Nature Neuroscience, Nature Medicine, Neuroscience and Biobehavioral Reviews, NeuroSignals, PLoS Computational Biology, Science, Stroke, and others

National Committees and Service: Grant Review Boards and ad hoc Grant Reviews:
Ad hoc NIH Small Grant Program (1996)
Ad hoc NIH Special Study Section - NRSA (1996)
Ad hoc Civilian Research and Defense Foundation (1996-1997)
Ad hoc Reviewer VA grants (2000)
Ad hoc NIH Special Study Section – RFA (2000)
Reviewer for Singapore Biomedical Research Council (2001-2005)
Ad hoc NIH MCDN4/NTRC Study Section (2002)
Ad hoc NIH MCDN3/BCST Study Section (2003)
Reviewer for Austrian FWF (2003)
Reviewer for Welcome Trust (1999-2009)
Reviewer for UK MRC (2004, 2009)
Reviewer for United States-Israel Binational Science Foundation (2004)
Ad hoc reviewer NSF (2004)
Reviewer for AIC International collaborative grant (2004)
Ad hoc NIH/NCRR COBRE Review Section (2005)
Ad hoc NINDS Advisory Committee NSD-C (2005)
Ad hoc NIH MCDN3/BCST Study Section (2005-2007)
NIH MCDN4/NTRC Regular Member Study Section (2003-2006)
NIH MCDN4/NTRC Study Section, *Chair* (2005-2006)
Ad hoc NIH Intramural Review Program (2006)
NIH NIAID Neuroprotectants / Biodefense Research (2007)
NIH T32 Special Emphasis Panels, Ad hoc Reviewer (2007)
Ad hoc NIH CMBG Study Section (2009)
Ad hoc reviewer for Michael J Fox Foundation (2009-2015)
Numerous NIH Special Emphasis Panels, Ad hoc Reviewer for multiple Study Sections (2006-2017)

National Committees and Service: Committee Service
Executive Committee Counciler, Atlanta Chapter, Society for Neuroscience (1995-1996)
President-elect, Atlanta Chapter, Society for Neuroscience (1996-1997)
President, Atlanta Chapter, Society for Neuroscience (1997-1998)
Scientific Advisory Board, NeurOp Inc. (2002-2010)
Scientific Advisory Board, Mnemosyne Pharmaceuticals (2011)
Consultant Sage Therapeutics (2011-2012)
Consultant, NeurOp Inc. (2013-2016)
Consultant, Janssen Pharmaceuticals Inc. (2014-present)
Consultant, Pfizer Inc. (2016-2017)
Consultant Boerringer-Ingleheim (2016-2017)
Director, Center for Functional Evaluation of Rare Variants (2016-present)
Scientific Advisory Board, Sage Therapeutics (2017-present)
AES Benchmark Steward – Area Lead (2018-2020)

Professional Organizations (current)
American Association for the Advancement of Science
American Society for Pharmacology and Experimental Therapeutics
American Epilepsy Society
Biophysical Society
Society for Neuroscience

Competitive Fellowships and Development Awards
2017 Emory University School of Medicine Synergy Award (1 year)
2013 NARSAD Distinguished Investigator Award (1 year)

2005	Michael J Fox Foundation (5 year)
2004	NARSAD Independent Investigator Award (2 year)
2002	Emory University Research Committee Grant (1 year)
2001	FRCP Advanced Technology Development Award (1 year)
2000	NARSAD Independent Investigator Award (2 year)
1999	Emory University Research Committee Grant (1 year)
1998	Burroughs-Wellcome Travel Award (1 year)
1997	Emory University Teaching Fund (1 year)
1995	American Epilepsy Society Research Starter Grant (1 year)
1995	John Merck Fund Faculty Development Award (4 years)
1995	Emory University Research Committee Grant (1 year)
1993	American Epilepsy Society Fellowship (Salk Institute, 1 year)
1992	National Research Service Award (Salk Institute, 1 year)
1990-4	Wellcome Trust, Brain Trust, and American Epilepsy SocietyTravel Awards
1989	National Research Service Award (University College London, 2 years)
1984-7	National Science Foundation Predoctoral Fellowship (3 years)

Research Grants as Principal Investigator (active)

2017	Janssen Pharmaceuticals (PI)	2017-2018
2016	NIH-NINDS R24 High Impact Neuroscience Resource Center	8/31/16 – 8/31/20
2016	Citizens United for Research in Epipelsy (CURE)	7/1/16 – 6/30/19
	"Functional and Clinical Evaluation of glutamate receptor mutaitons in epileptic encephalopathy"	
2015	NIH-NINDS R01 NS036654 (PI)	8/1/15 – 7/31/20
	"Control of glutamate receptor activation"	
2013	NIH-NINDS R01 NS065371 (PI)	4/1/13 – 3/31/18
	"Mechanism of action of novel subunit-selective NMDA receptor modulators"	

Research Grants as Principal Investigator (completed)

2014	Janssen Pharmaceuticals (PI) 2014-2017
2014	The Michael J Fox Foundation (PI)
2013	NARSAD Distinguished Investigator (PI)
2015	NIH-NINDS R01 NS068464 (PI)
2015	NIH-NIMH R21 MH094525 (PI)
2011	Lundbeck Research Grant (PI)
2011	NIH-NINDS R21 NS062204 (PI)
2008	Michael J Fox Found Target Validation Grant (PI)
2008	Pfizer Research Grant (PI)
2008	National Parkinson's Foundation (PI)
2006	Michael J Fox Fnd. Community Fast Track Grant for Parkinson's Disease (PI)
2000-2009	NIH-NINDS R01 NS39419 (PI)
2008	Emory University Research Committee (PI)
2007	NIH-NINDS R21 NS057063 (PI)
2004	NARSAD (PI)
2004	NIH-NINDS Adminitrative supplement not-ns-04-001 (PI)
2004	Emory Intramural Pilot grant CCPDER Parkinsons Pilot grant (PI)
2003	NIH-NIMH MH062646 RO1 (PI)
2002	University Research Committee (PI)
2001	FRCP Award / Advanced Technology Development (PI)
2000-2002	NARSAD (PI)
1998	University Research Committee (PI)
1996-1997	NIH-NIMH R03 MH054759 (PI)
1995-1999	John Merck Award (PI)
1995-1999	NIH-NINDS R29 NS033777 (PI)

1995 Epilepsy Foundation of America Grant (PI)
1995 University Research Committee (PI)

Research Grants as a co-PI, subcontract, or sponsor (completed)

2018-2020 NIH-NINDS NRSA 1F31NS106896 Predoctoral fellow Miranda McDaniel
2015-2020 NIH-OD U54OD020351 (PI – Jackson Labs)
2013-2015 NIH-NINDS NRSA 5F32NS086368 Postdoctoral Fellowship: Dr. Sharon Swanger
2012-2014 NIH-NINDS NRSA 5F32NS078873 Postdoctoral Fellowship: Dr. Alpa Khatri
2010-2012 NIH-NINDS NRSA 1F31NS07621 Predoctoral Fellowship: Stefka Gyoneva
2007-2011 NIH-R01 (PI – Dr. R Hall)
2006-2008 NIH-NINDS NRSA 1F31NS054515-01 Predoctoral Fellowship: Anna Goldsmidt
2006-2007 Benzon Foundation Fellowship Dr. Kasper Bo Hansen
2003-2008 NIH-NINDS NRSA NS36654-07S1 Predoctoral Fellowship: Cecily Hamill
2005-2006 Benzon Foundation Fellowship: Dr. Anders Kristensen
2005-2006 Epilepsy Society Fellowship: Dr. Shashank Dravid
2002-2005 NIH-NINDS NRSA 1F31NS43875 Postdoctoral fellowship: Dr. Justin Lee
2001-2003 NIH-NINDS NRSA 1F31NS42505 Predoctoral Fellowship: Candice Junge
2001-2002 Benzon Society Fellowship: Dr. Tue Banke
2001-2002 NIH-NIMH RO1 (PI – Dr. J.Conn)
1999-2001 NIH-NIMH NRSA 1F31NH11623 Predoctoral Fellowship: Melissa Gingrich
1998-2001 NIH-NINDS R01 (PI - Dr. J Conn)
1997-1999 NIH-NIMH R01 (PI - Dr. T Murray, subcontract)
1996 Novo Nordisk Support for Dr. Philip Wahl

Peer-reviewed Papers Book chapters, and Invited Reviews
** indicates 45 papers >100 cites, ** top 1% for Pharmacology, H-index 56—ISI and 66—Google Scholar)*

***1**. Harden TK, Petch LA, **Traynelis SF**, Waldo GL (1985). Agonist-induced alteration in the membrane form of muscarinic cholinergic receptors. *J Biol Chem* 260: 13060-13066. PMID: 4055732

***2**. Dingledine R, Boland LM, Chamberlin NL, Kawasaki K, Kleckner NW, **Traynelis SF**, Verdoorn TA (1988). Amino acid receptors and uptake systems in the mammalian central nervous system. *CRC Critical Reviews in Neurobiology* 4: 1-96. PMID: 2461808

***3. Traynelis SF,** Dingledine R (1988). Potassium-induced spontaneous electrographic seizures in the rat hippocampal slice. *J Neurophysiol* 59: 259-277. PMID: 3343603

***4. Traynelis SF,** Dingledine R (1989). Role of extracellular space in hyperosmotic suppression of potassium-induced electrographic seizures. *J Neurophysiol* 61: 927-938. PMID: 2723735

5. Traynelis SF, Dingledine R (1989). Modification of potassium-induced interictal bursts and electrographic seizures by divalent cations. *Neurosci Lett* 98: 194-199. PMID: 2565567

6. Traynelis SF, Dingledine R, McNamara JO, Butler L, Rigsbee L (1989). Effect of kindling on potassium-induced electrographic seizures in vitro. *Neurosci Lett* 105: 326-332. PMID: 2594218

7. Kawasaki K, **Traynelis SF**, Dingledine R (1990). Different responses of CA1 and CA3 regions to hypoxia in the rat hippocampal slice. *J Neurophysiol* 63: 385-394. PMID: 2158521

***8. Traynelis SF**, Cull-Candy SG (1990). Proton inhibition of N-methyl-D-aspartate receptors in cerebellar neurons. *Nature* 345: 347-350. PMID: 1692970

***9**. McBain CJ, **Traynelis SF**, Dingledine R (1990). Regional variation of extracellular space in hippocampus. *Science* 249: 674-677. PMID: 2382142

10. Cull-Candy SG, Wyllie DJA, **Traynelis SF** (1991). Excitatory amino acid gated channel types in mammalian neurons and glia, in *"Excitatory Amino Acids and Synaptic Transmission"*, eds. H.Wheal and A.Thomson. Academic Press, London, pp.69-90.

*__11.__ **Traynelis SF**, Cull-Candy SG (1991). Pharmacological properties and H^+ sensitivity of excitatory amino acid receptor channels in rat cerebellar granule neurones. *J Physiol* 433: 727-763. PMID: 1726797

*__12__. Silver RA, **Traynelis SF**, Cull-Candy SG (1992). Rapid time-course miniature and evoked excitatory currents at cerebellar synapses in situ. *Nature* 355: 163-166. PMID: 1370344

*__13__. Miller B, Sarantis M, **Traynelis SF**, Attwell D (1992). Potentiation of NMDA NMDA receptor currents by arachidonic acid. *Nature* 355: 722-725. PMID: 1371330

14. McBain CJ, **Traynelis SF**, Dingledine R (1992). High potassium induced synchronous bursts and electrographic seizures, in *"Models and Concepts in Epilepsy"*, ed. P.A. Schwartzkroin, Cambridge Univ Press, Cambridge, pp 437-461.

15. Wyllie DJA, **Traynelis SF**, Cull-Candy SG (1993). Evidence for more than one type of non-NMDA receptor in outside-out patches from rat cerebellar granule cells. *J Physiol* 463: 193-226. PMID: 7504104

*__16.__ **Traynelis SF**, Silver RA, Cull-Candy SG (1993). Estimated conductance of glutamate receptor-channels activated during EPSCs at the cerebellar mossy fiber-granule cell synapse. *Neuron* 11: 279-289. PMID: 7688973

*__17__. Pulchalski RB, Louis J-C, Brose N, **Traynelis SF**, Egebjerg J, Lin F, Kukekov V, Wenthold R, Rogers SW, Moran T, Morrison JH, Heinemann SF (1994). Selective RNA editing and subunit assembly of native glutamate receptors. *Neuron* 13: 131-147. PMID: 7519023

*__18__. Sullivan JM, **Traynelis SF**, Chen H-SV, Escobar W, Heinemann SF, Lipton SA (1994). Identification of two cysteine residues that are required for redox modulation of the NMDA subtype of glutamate receptor. *Neuron* 13: 929-936. PMID: 7524561

*__19.__ **Traynelis SF**, Hartley M, Heinemann SF (1995). Control of proton sensitivity of the NMDA receptor by RNA splicing and polyamines. *Science* 268: 873-876. PMID: 7754371

***20.** **Traynelis SF**, Wahl P (1997). Control of rat GluR6 glutamate receptor open probability by protein kinase A and calcineurin. *J Physiology* 503: 513-531. PMID: 9379408

21. Chung DS, Murphy TJ, **Traynelis SF**, Conn, PJ (1997). 4-methylhomoibotenic acid activates a novel metabotropic glutamate receptor coupled to phosphoinositide hydrolysis. *J Pharmacol Exper Therapeutics* 283: 742-749. PMID: 9353394

***22.** **Traynelis SF,** Jaramillo F (1998). Getting the most out of noise in the central nervous system. *Tr Neurosci* 21: 137-145. PMID: 9554720

23. Wahl P, Anker C, **Traynelis SF**, Egebjerg J, Rasmussen JS, Krogsgaard-Larsen P, Madsen U (1998). Antagonist properties of phosphono isoxazole amino acid (ATPO) at GluR1-4 AMPA receptor subtypes. *Mol Pharmacol* 53: 590-596. PMID: 9495827

*__24.__ **Traynelis SF**, Burgess MF, Zheng F, Lyuboslavsky P, Powers J (1998). Control of voltage independent zinc inhibition of NMDA receptors by the NR1 subunit. *J Neurosci* 18: 6163-6175. PMID: 9698310

*__25__. Zheng F, Gingrich MB, **Traynelis SF**, Conn PJ (1998). Tyrosine kinase potentiates NMDA receptor currents by reducing tonic zinc inhibition. *Nature Neuroscience* 1: 185-191. PMID: 10195142

*__26__. Mott DD, Doherty JJ, Zhang S, Washburn MS, Fendley MJ, Lyuboslavsky P, **Traynelis SF**, Dingledine R (1998). Phenylethanolamines inhib NMDA receptors by enhancing proton inhibition. *Nature Neuroscience* 1: 659-667. PMID: 10196581

27. Traynelis SF (1998). Software based correction of single compartment series resistance errors. *J Neurosci Meth* 86: 25-34. PMID: 9894783.

28. Traynelis SF (1998). pH modulation of ligand gated ion channels, in *"pH and Brain Function"*, eds. K Kaila and B. R. Ransom, Wiley-Liss, Inc. New York, pp. 395-446.

*__29__. Dingledine R, Borges K, Bowie D, **Traynelis SF** (1999). The glutamate receptor ion channels. *Pharmacological Reviews* 51: 7-61. PMID: 10049997.

*__30__. Banke TG, Bowie D, Lee H-K, Huganir RL, Schousboe A, **Traynelis SF** (2000) Control of GluR1 AMPA receptor function by cAMP-dependent protein kinase. *J Neurosci* 20: 89-102. PMID: 10627585.

*__31__. Gingrich MB, Junge C, Lyuboslavsky P, **Traynelis SF** (2000). Potentiation of NMDA receptor function by the serine protease thrombin. *J Neurosci* 20: 4582-4595. PMID: 10844028.

*__32__. Gingrich MB, **Traynelis SF** (2000). Serine proteases and brain damage – is there a link? *TINS* 23:399-407. PMID: 10941185

*__33__. Low C-M, Zheng F, Lyuboslavsky P, **Traynelis SF** (2000). Molecular determinants of coordinated proton and zinc inhibition of NMDA NR1/NR2A receptors. *PNAS* 97: 11062-11067. PMID: 10984504

34. Banke TG, Greenwood J, Christensen JK, Liljefors T, **Traynelis SF,** Schousboe A, Pickering DS (2001). Identification of amino acid residues in GluR1 responsible for ligand binding and desensitization. *J Neurosci* 21: 3052-3062. PMID: 11312290

35. Mott DD, Erreger K, Banke TG, **Traynelis SF** (2001). Open probability of homomeric murine 5-HT3A serotonin receptors depends on subunit occupancy. *J Physiol* 535.2: 427-443. PMID: 11533135

*__36__. Mannaioni G, Marino MJ, Valenti O, **Traynelis SF,** Conn PJ (2001). mGluR1 and mGluR5 differentially regulate CA1 pyramidal cell function. *J Neurosci* 21: 5925-5934. PMID: 11487615

***37**. Zheng F, Erreger K, Low C-M, Banke T, Lee CJ, Conn PJ, and **Traynelis SF** (2001) Allosteric interaction between the amino terminal domain and the ligand binding domain of NR2A *Nature Neurosci*. 4: 894-901. PMID: 11528420

38. Poisik OV, Mannaioni G, **Traynelis SF**, Smith Y, Conn, PJ (2003). Distinct Functional Roles of the Metabotropic Glutamate Receptors 1 and 5 in the Rat Globus Pallidus. *J Neurosci* 23: 122-130. PMID: 12514208

*__39.__ Banke TG, **Traynelis SF** (2003). Activation of NR1/NR2B NMDA receptors. *Nature Neuroscience* 6:144-152. PMID: 12524545.

40. Bowie D, Garcia EP, Marshall J, **Traynelis SF**, Lange, GD (2003) Allosteric regulation and spatial distribution of kainate receptors bound to ancillary proteins. *J Physiol* 547: 373-385. PMID: 12562952

***41**. Low CM, Lyuboslavsky P, French A, Le P, Wyatte K, Thiel WH, Marchan EM, Igarashi K, Kashiwagi K, Gernert K, Williams K, **Traynelis SF,** Zheng, F (2003) Molecular determinants of proton sensitive NMDA receptor gating. *Molecular Pharmacology* 63: 1212-1222. PMID: 12761330

*__42.__ Jin R, Banke T, Mayer ML, **Traynelis SF**, Gouaux E (2003) Structural basis for partial agonist action at ionotropic glutamate receptors, *Nature Neuroscience* 6: 803-810. PMID: 12872125

*__43.__ Junge CE, Sugawara T, Mannaioni G, Alagarsamy S, Conn PJ, Brat D, Chan P, **Traynelis SF** (2003) The contribution of protease activated receptor-1 to neuronal damage caused by transient focal ischemia. *PNAS* 100: 13019-13024. PMID: 14559973

*__44.__ Sorensen SD, Nicole O, Peavy RD, Montoya LM, Lee CJ, Murphy TJ, **Traynelis SF**, Hepler JR (2003) Common signaling pathways link activation of murine PAR1, LPA, and S1P receptors to proliferation of astrocytes. *Mol Pharmacol* 64: 1199-1209. PMID: 14573770

45. Olson E, Lyuboslavsky P, **Traynelis SF**, McKeon R. (2004) PAR-1 deficiency protects against neuronal damage and neurological deficits after unilateral cerebral hypoxia/ischemia. *J Cereb Blood Flow Metab* 24: 964-971. PMID: 15356417

***46**. Junge CE, Lee CJ, Hubbard KB, Zhang Z, Olson JJ, Brat D, Hepler JR, **Traynelis SF** (2004). Protease activated receptor-1 in human brain: localization and functional expression in astrocytes. *Experimental Neurology*, 188: 94-103. PMID: 15191806

*__47__. Erreger K, Chen P, Wyllie DJA, **Traynelis SF** (2004). Glutamate receptor gating *Critical Reviews in Neurobiology*, 16: 187-224. PMID: 15701057

48. Junge CE, Sugawara T, Olson EE, Lyuboslavsky P, McKeon RJ, Chan PH**, Traynelis SF** (2004) A Role for Protease Activated Receptor-1 (PAR1) in the neurodegenerative processes of ischemia. J Krieglstein, S Klumpp (Eds.) "Pharmacology of Cerebral Ischemia". Medpharm Scientific Publishers, Stuttgart, Germany pgs. 301-311.

49. Banke TG, Dravid SM, **Traynelis SF** (2005) Protons trap NR1/NR2B NMDA receptors in a nonconducting state. *J Neurosci* 25: 42-51. PMID: 15634765

*__50__. Erreger K, Dravid SM, Banke TG, Wyllie DJA, **Traynelis SF** (2005) Subunit-specific gating controls rat NR1/NR2A and NR1/NR2B NMDA channel kinetics and synaptic signaling profiles. *J Physiol* 552: 335-344. PMID: 15649985

51. LePage KT, Ishmael JE, Low CM, **Traynelis SF**, Murray TF (2005) Differential binding properties of [^{3}H]dextrorphan and [^{3}H]MK-801 in heterologously expressed NMDA receptors. *Neuropharmacology* 49: 1-16. PMID: 15992576

***52**. Chen PE, Geballe MT, Stansfeld P, Johnston AR, Yuan H, Jacob AL, Synder JP, **Traynelis SF,** Wyllie DJA (2005). Structural features of the glutamate binding site in recombinant NR1/NR2A *N*-methyl-D-aspartate receptors determined by site-directed mutagenesis and molecular modeling. *Molecular Pharmacology* 67: 1470-84. PMID: 15703381

53. Hamill CE, Goldshmidt A, Nicole O, McKEon RJ, Brat, D. **Traynelis SF** (2005) Glial reactivity after damage: implications for scar formation and neuronal recovery *Clinical Neurosurgery* 52: 29-44. PMID: 16626052

***54**. Nicole O, Goldshmidt A, Hamill, CE, Sorensen SD, Sastre A, Lyuboslavsky P, Hepler JR, McKeon R, **Traynelis SF** (2005) Activation of protease-activated receptor-1 triggers astrogliosis after brain injury. *J Neurosci* 25: 4319-4329. PMID: 15858058

***55**. Fam SR, Paquet M, Castleberry, AM, Oller H, Lee CJ, **Traynelis SF**, Smith Y, Yun CC, Hall RA (2005) P2y1 receptor signalling is controlled by interaction with the PDZ scaffold NHERF-2. *PNAS* 102: 8042-7. PMID: 15901899

56. Wong E, Ng F-M, Yu C-Y, Lim P, Lim L-H, **Traynelis SF**, Low C-M. (2005). Expression and characterization of soluble amino-terminal domain of NR2B subunit of *N*-methyl-*D*-aspartate receptor. *Protein Science* 14: 2275-2283. PMID: 16131656

57. Yuan H, Erreger K, Dravid SM, and **Traynelis SF** (2005) Conserved structural and functional control of NMDA receptor gating by transmembrane domain M3. *J Biol Chem* 280: 29708-16. PMID: 15970596

58. Holm MM, Lunna M-L, **Traynelis SF**, Kastrup JS, Egebjerg J (2005) Structural determinants of agonist-specific kinetics at the ionotropic glutamate receptor 2. *PNAS* 102: 12053-58. PMID: 16099829

59. Holm MM, Naur P, Vestergaard B, Geballe, MT, Gajhede M, Kastrup JS, **Traynelis SF**, Egebjerg J (2005) A binding site tyrosine shapes desensitization kinetics and agonist potency at GluR2: A mutagenic, kinetic, and crystallographic study *J Biol Chem* 280: 35469-35476. PMID: 16103115

60. Erreger K, Geballe MT, Dravid S, Snyder S, Wyllie DJA, **Traynelis SF** (2005) Mechanism of partial agonism at NR1/NR2A NMDA receptors for a conformationally restricted glutamate analogue. *J Neurosci* 25: 7858-66. PMID: 16120788

61. Erreger K, **Traynelis SF** (2005) Allosteric interaction between the zinc and glutamate binding domains on NR2A causes desensitization of NMDA receptors. *J. Physiol.* 569: 381-393. PMID: 16166158

62. Kristensen AS, Geballe MT, Snyder JP, **Traynelis SF** (2006) Glutamate receptors: variation in structure – function coupling. *Tr Pharmacol Sci* 27: 65-69. PMID: 16406088

63. Paquet M, Asay MJ, Fam SR, Inuzuka H, Castleberry AM, Oller H, Smith Y, Yun CC, **Traynelis SF**, Hall R (2006) The PDZ scaffold NHERF-2 interacts with mGluR5 and regulates receptor activity. *J Biol Chem* 281: 29949-61. PMID: 16891310

64. Dravid SM, Yuan H, **Traynelis SF** (2006) AMPA receptors molecular biology, pharmacology. In *New Encycolopedia of Neuroscience* Ed Larry R. Squire, Elsevier Science Limited.

*__65__. Lee CJ, Mannaioni G, Yuan H, Woo DH, Gingrich MB, **Traynelis SF** (2007) Astrocytic control of synaptic NMDA receptors. *J Physiol* 581: 1057-81. PMID: 17412766

***66.** Traynelis SF, Trejo J (2007) Protease-activated receptor signaling: new roles and regulatory mechanisms. *Current Opinion Haematology* 14: 230-5. PMID: 17414212

***67**. Dravid S, Erreger K, Yuan H, Lyuboslavsky P, Le, P, Almonte A, Barber J, Nicholson K, French A, Murray E, Balster R, Murray TF, and **Traynelis, SF** (2007) Subunit specific mechanisms and proton sensitivity of NMDA receptor channel block. *J Physiol* 581: 107-28. PMID: 17303642

68. Hansen KB, Yuan H, **Traynelis SF** (2007) Structural aspects of AMPA receptor activation, desensitization, and deactivation. *Curr Opinion in Neurobiology*, 17: 281-8. PMID: 17419047

69. Almonte AG, Hamill CE, Chhatwal JP, Wingo TS, Barber JA, Lyuboslavsky PN, Ressler KJ, Holtzman SG, White DA, **Traynelis SF** (2007) Learning and memory deficits in mice lacking protease activated receptor-1. *Neurobiology of Learning and Memory* 88: 295-304. PMID: 17544303

70. Hamill CE, Caudle MW, Richardson JR, Yuan H, Pennell KD, Greene JG, Miller GW, **Traynelis SF** (2007). Exacerbation of dopaminergic terminal damage in a mouse model of Parkinson's disease by the G-protein coupled receptor PAR1. *Molecular Pharmacology* 72: 653-64. PMID: 17596374

***71.** Naur P, Hansen KB, Kristensen AS, Dravid SM, Pickering DS, Olsen L, Vestergaard B, Egebjerg J, Gajhede M, **Traynelis SF**, Kastrup JS (2007) Ionotropic glutamate-like receptor delta2 binds D-serine and glycine. *PNAS* 104: 14116-21. PMID: 17715062

***72**. Erreger K, Geballe MT, Kristensen A, Chen PE, Hansen KB, Lee CJ, Yuan H, Le P, Lyuboslavsky PN, Micale N, Jørgensen L, Clausen R, Wyllie DJA, Snyder JP, **Traynelis SF** (2007) Subunit-specific agonist activity at NR2A, NR2B, NR2C, and NR2D containing N-methyl-D-aspartate glutamate receptors. *Mol Pharmacol*, 72: 907-20. PMID: 17622578

73. Kristensen A, Hansen KB, Wollmuth L, Egebjerg, J **Traynelis SF** (2007) Molecular determinant of glutamate receptor function. In "The glutamate receptors" (Swanson, Gereau), Humana. Pp 247-298.

74. Chen PE, Geballe MT, Katz E, Erreger K, Livesey MR, O'Toole KK, Le P, Lee CJ, Snyder JP, **Traynelis SF,** Wyllie DJA (2008) Modulation of glycine potency in rat recombinant N-methyl-D-aspartate receptors containing chimeric NR2A/2D subunits expressed in Xenopus laevis oocytes. *J Physiol* 586: 227-45. PMID: 17962328

75. Erreger K, **Traynelis SF** (2008) Zinc inhibition of rat NR1/NR2A N-methyl-D-aspartate receptors. *J Physiol* 586: 763-78. PMID: 18048453

76. Mannaioni G, Orr AG, Hamill CE, Yuan H, Pedone KH, McCoy KL, Berlinguer Palmini R, Junge CE, Lee CJ, Yepes M, Hepler JR, **Traynelis SF** (2008) Plasmin potentiates synaptic NMDA receptor function in rat hippocampal neurons through activation of PAR1. *J Biol Chem* 283: 20600-11. PMID: 18474593

77. Clausen RP, Christensen C, Hansen KB, Greenwood J, Jørgensen L, Micale N, Madsen JC, Nielsen B, Egebjerg J, Bräuner-Osborne H, **Traynelis SF**, Kristensen JL. (2008) N-Hydroxypyrazol glycine derivatives as selective *N*-methyl-D-aspartic acid receptor ligands. *J Med Chem* 51: 4179-4187. PMID: 18578474

78. Dravid SM, Prakesh A, **Traynelis, SF** (2008) Activation of recombinant NR1/NR2C NMDA receptors. *J Physiol* 586: 4425-39. PMID: 18635641

79. Tahirovic, YA, Geballe M, Gruszecka-Kowalik E, Liotta D, Myers SJ, Lyuboslavsky P, Le P, French A, Irier H, Choi W-B, Easterling K, Yuan H, Wilson LJ, Kotloski R, McNamara JO, Dingledine R, Liotta DC, **Traynelis SF**, Snyder JP (2008). Enantiomeric propanolamines as selective NR2B NMDA receptor antagonists. *J Med Chem* 51: 5506-5521. PMID: 18800760

80. Yuan H, Geballe MT, Hansen KB, **Traynelis SF** (2008) Structure and Function of NMDA receptors. in "Glutamate Receptors" Eds M Ehlers and J Hell, Springer Verlag.

81. Hansen KB, Naur P, Kurtkaya NL, Kristensen AS, Gajhede M, Kastrup JS, **Traynelis SF** (2009) Modulation of the dimer interface at ionotropic glutamate-like receptor δ2 by D-serine and extracellular calcium. *J Neurosci* 29: 907-17. PMID: 19176800

82. Sivaprakasam M, Hansen KB, David O, Nielsen B, **Traynelis SF**, Clausen RP, Couty F, Bunch L (2009) Sterocontrolled synthesis and pharmacological evaluation of azetidine 2,3-dicarboxylic acids at NMDA receptors. *Chem Med Chem* 4: 110-7. PMID: 19009584

83. Ng F-M, Geballe MT, Snyder JP, **Traynelis SF**, Low C-M (2009) Structural insights into phenylethanolamines high-affinity binding site in NR2B from binding and molecular modeling studies. *Molecular Brain* 1:16. PMID: 19017396

84. Hamill CE, Mannaioni G, Lyuboslavsky P, Sastre AA, **Traynelis SF** (2009) Protease-activated receptor 1-dependent neuronal damage involves NMDA receptor function. *Experimental Neurology*, 217: 136-146. PMID: 19416668

85. Yuan H, Vance KM, Junge CE, Geballe MT, Snyder JP, Hepler JR, Yepes M, Low CM, **Traynelis SF** (2009) The serine protease plasmin cleaves the amino terminal domain of the NR2A subunit to relieve zinc inhibition of the N-methyl-D-aspartate receptor. *J Biol Chem* 284: 12862-73 PMID: 19240037

***86**. Yuan H, Hansen BK, Vance K, Ogden KK, **Traynelis SF** (2009) Control of N-methyl-D-aspartate receptor function by the NR2 subunit amino-terminal domain. *J Neuroscience* 29: 12045-58. PMID: 19793963

***87.** Orr A, Orr AL, Gross RE, Li, X-J, **Traynelis SF** (2009) Adenosine A(2A) receptor mediates microglial process retraction. *Nature Neuroscience* 12: 872-878 PMID: 19525944

88. Mosley CA, Myers SJ, Murray EE, Santangelo R, Tahirovic YA, Kurtkaya N, Mullasseril P, Yuan H, Lyuboslavsky P, Le P, Wilson LJ, Yepes M, Dingledine R, **Traynelis SF**, Liotta DC (2009). Synthesis, structural activity-relationships, and biological evaluation of novel amide-based allosteric binding site antagonists in NR1A/NR2B N-methyl-D-aspartate receptors. *Bioorganic Med Lett* 17: 6463-80. PMID: 19648014

89. Park, H, Oh SJ, Han KS, Woo DH, Park H, , Mannaioni G, **Traynelis SF**, Lee CJ (2009) Bestrophin-1 encodes for the Ca^{2+}-activated anion channel in hippocampal astrocytes. *J Neurosci* 29: 13063-73 PMID: 19828819

90. Kang SS, Han K-S, Ku BM, Lee YK, Hong J, Shin HY, Almonte AG, Woo DH, Brat DJ, Hwang EM, Yoo SH, Chung CK, Park S-H, Paek SH, Roh EJ, Lee SJ, Park J-Y, **Traynelis SF**, Lee CJ (2010) Caffeine-mediated inhibition of calcium release channel inositol 1,4,5-triphosphate receptor subtype 3 blocks glioblastoma invasion and extends survival. *Cancer Research* 70: 1173-83. PMID: 20103623

91. McCoy KL, **Traynelis SF**, Hepler JR (2010) PAR1 and PAR2 couple to overlapping and distinct sets of G proteins and linked signalling pathways to differentially regulate cell physiology. *Mol Pharmacol* 77: 1005-15. PMID: 20215560

92. Hansen KB, Mullasseril P, Dawitt S, Kurtkaya NL, Yuan H, Vance KM, Orr AG, Kvist T, Ogden KK, Le P, Vellano KM, Lewis I, Kurtkaya S, Du Y, Qui M, Snyder JP, Bräuner-Osborne H, **Traynelis SF** (2010) Implementation of a fluorescence-based screening assay identifies H3 antagonists clobenpropit and iodophenprobit as subunit-selective NMDA recpetor antagonists. *J Pharmacol Exper Ther* 333: 650-662 PMID: 20197375

93. Mullasseril P, Hansen KB, Vance KM, Ogden KK, Yuan H, Kurtkaya NL, Santangelo R, Orr AG, Le P, Vellano KM, Liotta D, **Traynelis SF** (2010) A subunit-selective potentiator of NR2C- and NR2D-containing NMDA receptors. *Nature Communication*, 1: DOI 10.1038/Ncomms1085 PMID: 20981015

94. Dravid SM, Prakash A, Burger PB, Geballe MT, Yadav R, Le P, Vellano K, Snyder JP, **Traynelis, SF** (2010) Structural determinants of D-cycloserine efficacy at the NR1/NR2C NMDA receptors. *J Neurosci* 30: 2741-54 PMID: 20164358

95. Mosley CA, Acker TM, Hansen KB, Mullasseril P, Andersen KT, Le P, Vellano KM, Brauner-Osborne H, Liotta DC, **Traynelis SF** (2010) Quinazolin-4-one derivatives: a novel class of noncompetitive NR2C/D subunit-selective NMDA receptor antagonists. *J Med Chem* 53: 5476-90 PMID: 20684595

*,** **96**. **Traynelis SF**, Wollmuth LP, McBain CJ, Menniti FS, Vance KM, Ogden KK, Hansen KB, Yuan H, Myers SJ, Dingledine R (2010) Glutamate receptor ion channels: structure, regulation, and function. *Pharmacol Rev*. 62: 405-496 PMID: 20716669

97. Hansen KB, Furukawa H, **Traynelis SF** (2010) Control of assembly and function of glutamate receptors by the amino-terminal domain. *Mol Pharmacol* 78: 535-49. PMID: 20660085

98. Li F, Wang W, Gu M, Gyoneva S, Zhang J, Huang S, **Traynelis SF**, Cai H, Guggino SE, Zhang X (2011) L-type calcium channel activity in osteoblast cells is regulated by the actin cytoskeleton independent of protein trafficking. *J Bone and Mineral Metabolism*. 29: 515-25. Doi: 10.1007/s00774-010-0252-6 PMID: 21246227

99. Hansen KB, **Traynelis SF** (2011) Structural and mechanistic determinants of a novel site for noncompetitive inhibition of GluN2D-containing NMDA receptors. *J Neuroscience* 31: 3650-61 PMID:21389220

100. Vance KM, Simorowski N, **Traynelis SF**, Furukawa H (2011) Ligand-specific deactivation time course of GluN1/GluN2D NMDA receptors. *Nature Communications*, 2: article number 294 doi:10.1038/ncoms1295 PMID 21522138

***101.** Kristensen A, Jenkins MW, Banke TG, Schousboe A, Makino Y, Johnson RC, Huganir R, **Traynelis SF** (2011). Mechanism of Ca^{2+}/calmodulin kinaseII regulation of AMPA receptor gating. *Nature Neuroscience*, 14(6): 727-35 doi.10.1038/nn.2804 PMID 21516102

102. Han K-S, Mannaioni G, Hamill CE, Lee J, Junge CE, Lee CJ, **Traynelis SF** (2011). Activation of protease activated receptor 1 increases the excitability of dentate granule neurons of hippocampus. *Molecular Brain* 10;4:32. PMID: 21827709

103. Acker TM, Yuan H, Hansen KB, Vance KM, Ogden KK, Jensen HS, Burger PB, Mullasseril P, Snyder SP, Liotta DC, **Traynelis SF** (2011). Mechanism for non-competitive inhibition by novel GluN2C/D NMDA receptor subunit-selective modulators. *Molecular Pharmacology*. 80: 782-95. PMID: 21807990

***104.** Ogden KK, **Traynelis SF** (2011) New advances in NMDA receptor pharmacology. *Tr Pharmacol Sci.* 32: 726-33. PMID: 21996280

105. Hedegaard M, Hansen KB, Andersen KT, Bräuner-Osborne H, **Traynelis SF** (2012) Molecular pharmacology of human NMDA receptors. *Neurochem Int.* 61: 601-9 DOI 10.1016/j.neuint.2011.11.016 PMID 22197913

106. Jenkins M, **Traynelis SF** (2012). PKC phsophorylates GluA1-Ser831 to enhance AMPA receptor conductance. *Channels.* 6: epub PMID:22373567

107. McCoy K, Gyoneva S, Vellano C, Smrcka AV, **Traynelis SF**, Hepler J (2012) Protease-Activated Receptor 1(PAR1) coupling to Gq/11 but not to Gi/o or G12/13 is mediated by discrete amino acids within the receptor second intracellular loop *Cellular Signalling* 24: 1351-1360 PMID:22306780

108. Hansen BK*, Ogden KK*, **Traynelis SF** (2012) Subunit-selective allosteric inhibition of glycine binding to NMDA receptors. *J Neurosci* 32: 6197-6208 *(*contributed equally)* PMID:22553026

109. Vance KM, Hansen KB, **Traynelis SF** (2012) GluN1 splice variant control of GluN1/GluN2D receptors. *J Physiol* 590: 3857-75. Doi: 10.1113/jphysiol.2012.234062. PMID 22641781

110. Burger PB, Yuan H, Karakas E, Geballe M, Furukawa H, Liotta DC, Snyder JP, **Traynelis SF** (2012) Mapping the binding of GluN2B-selective NMDA receptor negative allosteric modulators. *Mol Pharmacol* 82: 344-59. PMID 22596351

111. Oh S-J, Han K-S, Park H, Woo D, Kim HY, **Traynelis SF**, Lee CJ (2012) Protease activated receptors 1-induced glutamate release in cultured astrocytes is mediated by Bestrophin-1 channel but not by vesicular exocytosis. *Mol Brain* 5: 38 doi:10,1186/1756-6606-5-38 PMID 23062602

112. Santangelo RM, Acker TM, Zimmerman SS, Katzman BM, Strong KL, **Traynelis S**F, Liotta DL (2012) Novel NMDA Receptor Modulators: An Update. *Expert Opinion on Therapeutic Patents* 22: 1337-52. PMID 23009122

113. Selvakumar B, Jenkins MA, Hussain NK, Huganir RL, **Traynelis SF**, Snyder SH (2013) S-nitrosylation of AMPA Receptor GluA1 regulates phosphorylation, single channel conductance, and endocytosis. *PNAS* 110:1077-82. Doi: 10.1073/pnas.1221295110 PMID 23277581

114. Ogden KK, **Traynelis SF** (2013) Contribution of the M1 transmembrane helix and pre-M1 region to positive allosteric modulation and gating of N-methyl-D-aspartate receptors. *Molecular Pharmacology* 83(5):1045-56. Doi: 10.1124/mol.113.085209. PMID 23455314

115. Vance KM, Hansen KB, **Traynelis SF** (2013). Modal gating of GluN1/GluN2D NMDA receptors *Neuropharmacology* 71: 184-90 doi: 10.1016/j.neuropharm.2013.03.018 PMID 23578394

116. Risgaard R, Nielsen SD, Hansen KB, Jensen CM, Nielsen B, **Traynelis SF**, Clausen RP (2013) Development of 2'-substituted (2S,1'R,2'S)-2-(carboxycyclopropyl)glycine analogues as potent N-methyl-D-aspartic acid receptor agonists. *J Med Chem* 56: 4071-81 PMID 23614571

117. Gyoneva S, **Traynelis SF** (2013) Norepinephrine modulates the motility of resting and activated microglia via different adrenergic receptors. *J Biol Chem* 288: 15291-302 PMID 23548902

118. Freel RMS, Ogden KK, Strong KL, Khatri A, Chepiga KM, Jensen HS, **Traynelis SF**, Liotta DC (2013) Synthesis and SAR of tetrahydroisoquinoline-based potentiators of GluN2C/D containing NMDA receptors. *J Med Chem* 56:5351-81 PMID 23627311

119. Hansen KB, Tajima N, Risgaard R, Perszyk R, Jorgensen L, Vance KM, Ogden KK, Clausen RP, Furukawa H, **Traynelis SF** (2013) Structural determinants of agonist efficacy at the glutamate binding site of NMDA receptors. *Molecular Pharmacology* 84: 114-27 PMID 23625947

120. Acker TM, Khatri A, Vance KM, Slabber C, Basca J, Snyder JP, **Traynelis SF**, Liotta DC (2013) Structure-activity relationships and pharmacophore model of a non-competetive pyrazoline containing class of GluN2C/GluN2D selective antagonists *J Med Chem* 56: 6434-56. PMID 23909910

121. Ogden KK, Khatri A, **Traynelis SF**, Heldt SA (2014) Potentiation of GluN2C/D NMDA receptor subtypes in the amygdala facilitates the retention of fear and extinction learning in mice *Neuropsychopharmacology* 39:625-37 doi 10.1038/npp.2013.241. PMID 24008353

122. Kvist T, Steffensen TB, Greenwood JR, Tabrizi FM, Hansen KB, Gajhede M, Pickering DS, **Traynelis SF**, Kastrup JS, Bräuner-Osborne H (2013) Crystal structure and pharmacological characterization of a novel NMDA receptor antagonist at the GluN1 glycine-site. *J Biol Chem* 288:33124 PMID 24072709

123. Kvist T, Greenwood JR, Hansen KB, **Traynelis SF**, Bräuner-Osborne H (2013) Structure-based discovery of antagonists for GluN3-containing *N*-Methyl-D-Aspartate receptors. *Neuropharmacology* 75:324-336. PMID 23973313

124. Yuan H, Hansen KB, Zhang J, Pierson TM, Markello TC, Fuentes-Fajardo KV, Holloman CM, Golas G, Adams DR, Boerkoel CF, Gahl WA, **Traynelis SF** (2014) Functional analysis of a *de novo GRIN2A* missense mutation associated with early-onset epileptic encephalopathy. *Nature Communications*, 5: 3251 doi: 10.1038/ncomms4251. PMID: 24504326

***125**. Hansen KB, Ogden KK, Yuan H, **Traynelis SF** (2014) Distinct functional and pharmacological properties of triheteromeric GluN1/GluN2A/GluN2B NMDA receptors. *Neuron* 81: 1084-1096. PMID 24607230

126. Jenkins MA, Wells G, Bachman J, Snyder JP, Jenkins A, Huganir RL, Oswald RE, **Traynelis SF** (2014). Regulation of GluA1 alpha-Amino-3-Hydroxy-5-Methyl-4-isoxazolepropionic acid receptor function by Protein Kinase C at Serine-818 and Threonine-840. *Molecular Pharmacology* 85: 618-29 PMID 24452473

127. Zimmerman SS, Khatri A, Garnier-Amblard EC, Mullasseril P, Kurtkaya NL, Gyoneva S, Hansen KB, **Traynelis SF**, Liotta DC (2014) Design, synthesis, and structure-activity relationship of a novel series of GluN2C-selective potentiators. *J Med Chem* 57: 2334-56 PMID 24512267

128. Pierson TM, Yuan H, Marsh ED, Fuentes-Fajardo K, Adams DR, Markello T, Golas G, Simeonov DR, Holloman C, Tankovic A, Karamchandani MM, Schreiber JM, Mullikin JC, Tifft CJ, Toro C, Boerkoel CF, **Traynelis SF**, Gahl

WA. (2014) Grin2A mutation and early onset encephalopathy: personalized therapy with memantine. *Annals of Clinical and Translational Neurology* 1: 190-198. PMID: 24839611

129. Gyoneva S, Shapiro L, Lazo C, Garnier-Amblard E, Smith Y, Miller GW, **Traynelis SF** (2014) Adenosine A_{2A} receptor antagonism reverses inflammation-induced impairment of microglial process extension in a model of Parkinson's disease. *Neurobiology of Disease*, 67: 191-202. PMID 24632419

130. Gyoneva S, Davalos D, Biswas D, Swanger S, Garnier-Amblard E, Loth F, Akassoglou K, **Traynelis SF (**2014) Systemic inflammation regulates microglial responses to tissue damage *in vivo Glia*, 62: 1345-60. PMID 24807189

131. Adams DR, Yuan H, Holyoak T, Arajs KH, Hakimi P, Markello TC, Wolfe L, Vilboux T, Burton BK, Fajardo KF, Grahame G, Hollman C, Sincan M, Smith ACM, Wells GA, Huang Y, Vega H, Snyder JP, Golas GA, Tifft CJ, Boerkoel CF, Hanson RW, **Traynelis SF**, Kerr DS, Gahl WA (2014) Three rare diseases in one Sib pair: *RAI1*, *PCK1*, *GRIN2B* mutations associated with Smith-Magenis Syndrome, cytosolic PEPCK deficiency, and NMDA receptor glutamate insensitivity. *Molecular Genetics and Metabolism* 113: 161-170 S1096-7192(14)00126-7. Doi: 10.1016/j.ymgme.2014.04.001. [Epub ahead of print].

132. Khatri A, Burger P, Swanger SA, Hansen KB, Zimmerman SS, Karakas E, Liotta DC, Furukawa H, Snyder JP, **Traynelis SF** (2014) Structural determinants and mechanism of action of a GluN2C-selective NMDA receptors positive allosteric modulator. *Molecular Pharmacology* 86: 548-560. PMID 25205677

133. Strong K, Yao J, Prosser A, **Traynelis SF**, Liotta DC (2014). NMDA receptor modulators: an updated patent review *Expert Opinion on Therapeutic Patents*, 24(12):1349-66 PMID 25351527

134. Poulsen MH, Andersen J, Christensen R, Hansen KB, **Traynelis SF**, Strømgaard K, Kristensen AS (2015) Binding of ArgTX-636 in the NMDA receptor ion channel. *J Molecular Biology* 427: SI 176-189. Doi: 10.1016/j.jmb.2014.05.017. PMID 24862283

135. Park H, Han KS, Seo J, Lee J, Dravid SM, Woo J, Chun H, Cho S, Bae J, An H, Koh W, Yoon BE, Berlinguer-Palmini R, Mannaioni G, **Traynelis SF**, Bae Y, Choi SY, Lee C (2015) Channel-mediated astrocytic glutamate modulates hippocampal synaptic plasticity by activating postsynaptic NMDA receptors. *Mol Brain* 8:7. PMID 25645137

136. Yuan H, Myers SJ, Wells G, Nicholson KL, Lyuboslavsky P, Tahirovic Y, Ganesh T, Liotta DC, Snyder JP, **Traynelis SF** (2015) Context-dependent GluN2B-selective inhibitors of NMDA receptor function are neuroprotective with minimal side effects. *Neuron* 85: 1305-1318. PMID 25728572

137. Yuan H, Low CM, Moody OA, Jenkins A, **Traynelis SF** (2015) Ionotropic GABA and glutamate receptor mutations and human neurological diseases. *Molecular Pharmacology* 88: 203-217. PMID 25904555

138. Heinzen EL, Neale BM, **Traynelis SF**, Allen AS, Goldstein DB (2015) The genetics of neuropsychiatric diseases: Looking in and Beyond the Exome *Ann. Rev Neuroisci* 38: 47-68. PMID 258400007

139. EpiPM Consortium (Sam F Berkovic, Norman Delanty, Tracy J Dixon-Salazar, Dennis J Dlugos, Wayne N Frankel, David B Goldstein, Erin L. Heinzen, Ingo Helbig, Daniel H Lowenstein, Heather C Mefford, Jack M Parent, Steve Petrou, Annapurna Poduri, Ingrid E Scheffer, **Stephen F Traynelis**), Goldstein DB corresponding author (2015) A road map for precision medicine in the epilepsies. *Lancet Neurology* 14(12):1219-28. PMID 26416172

140. Swanger S*, Vance KM*, Pare J-F, Sotty F, Fog K, Smith Y, **Traynelis SF** (2015) GluN2D-specific NMDA receptor control of the subthalamic nucleus. *J Neuroscience*, 35: 15971-83. PMID 26631477

141. Katzman BM, Perszyk RE, Yuan H, Tahirovic YA, Sotimehin AE, **Traynelis SF**, Liotta DC (2015) A novel class of negative allosteric modulators of NMDA receptor function. *Bioorganic Medicinal Chemistry Letters* 25: 5583-8. PMID 26525866

142. Bulter AJ, Kallos J, Housely SN, LaPlaca MC, **Traynelis SF**, Wolf SL (2015) Randomized, placeo-controlled, double-blind pilot studyof D-cycloserine in chronic stroke. *Rehabilitation Research and Practice*, Article ID 534239, dx.doi.org/10.1155/2015/534239 PMID 26587287

143. Kristensen AS, Hansen KB, Naur P, Olsen L, Levasseur NL, Dravid SM, Pøhlsgaard J, Gajhede M, Kastrup JS, **Traynelis SF** (2016) Pharmacology of the D-serine binding site of glutamate-like GluD2 receptors. *Molecular Pharmacology* 89(2):253-62. PMID 26661043

144. Gyoneva S, Weinshenker D, **Traynelis SF** (2016). Altered motility of plaque-associated microglia in a model of Alzheimer's disease. *Neuroscience* 330: 410-20. PMID 27288150

145. Taylor CP, **Traynelis SF**, Siffert J, Pope LE, Matsumoto R (2016) Pharmacology of dextromethorphan: relevance to dextromethorphan/Quinidine (Neudexta®) Clinical use. *Pharamcol Ther* pii: S0163-7258(16)30056-0.

146. Perszyk RE, DiRaddo JO, Strong KL, Low CM, Ogden KK, Khatri A, Vargish GA, Pelkey KA, Tricoire L, Liotta DC, Smith Y, McBain CJ, **Traynelis SF** (2016) GluN2D-Containing N-methyl-D-Aspartate Receptors Mediate Synaptic Transmission in Hippocampal Interneurons and Regulate Interneuron Activity. *Molecular Pharmacology*, 90: 689-702. PMID 27625038

147. Swanger SA, Chen W, Wells G, Burger PB, Tankovic A, Bhattacharya S, Strong KL, Hu C, Kusumoto H, Zhang J, Adams DR, Millichap JJ, Petrovski S, **Traynelis SF**, Yuan H (2016) Mechanistic Insight into NMDA Receptor Dysregulation by Rare Variants in the GluN2A and GluN2B Agonist Binding Domains.. *American Journal of Human Genetics*, 99: 1261-1280. Doi: pii:10.1016/j.ajhg.2016.10.002 PMID 27839871

148. Li D, Yuan H, Ortiz-Gonzalez XR, Marsh ED, Tian L, McCormick EM, Kosobucki GJ, Chen W, Schulien AJ, Chiavacci R, Tankovic A, Naase C, Brueckner F, von Stülpnagel-Steinbeis C, Hu C, Kusumoto H, Hedrich UB, Elsen G, Hörtnagel K, Aizenman E, Lemke JR, Hakonarson H, **Traynelis SF**, Falk MJ. (2016) *GRIN2D* Recurrent De Novo Dominant Mutation Causes a Severe Epileptic Encephalopathy Treatable with NMDA Receptor Channel Blockers. *American Journal of Human Genetics*, 99:802-816 oi: 10.1016/j.neuroscience.2016.05.061. PMID 27288150

149. Hu C, Chen W,Myers SJ, Yuan H, **Traynelis SF** (2016) Human *GRIN2B* variants in neurodevelopmental disorders. *Journal of Pharmacological Sciences*, 132: 115-121 doi: 10.1016/j.jphs.2016.10.002 PMID 27818011

150. Strong, KL, Epplin EP, Jing Y, **Traynelis SF**, Liotta DC (2016) Mechanism of action of a GluN2C- and GluN2D-selective NMDA receptor positive allosteric modulator. In "*Allosterism in Drug Discovery*" Ed. Dario Doller, pp 281-309, doi:10.1039/9781782629276-00281.

151. Tamborini L, Chen Y, Foss CA, Pinto A, Horti AG, **Traynelis SF**, De Micheli C, Mease RC, Hansen KB, Conti P, Pomperb MG (2016) Development of radiolabeled ligands targeting the glutamate binding site of NMDA receptors as potential brain imaging agents. *Journal of Medicinal Chemistry*, doi 10.102/acs.jmedchem.6b01344

152. Ogden KK, Chen W, Swanger SA, McDaniel MJ, Hu C, Tankovic A, Kusumoto H, Kosobucki GJ, Schulien AJ, Su Z, Pecha J, Bhattacharya S, Aizenman E, **Traynelis SF,** Yuan H (2017) Disease-associated mutations implicate the pre-M1 region of NMDA receptors in channel gating. *PLOS Genetics*, PloS Genet. 2017 Jan 17;13(1):e1006536. Doi: 10.1371/journal.pgen.1006536. PMID 28095420.

153. Chen W, Tankovic A, Burger P, **Traynelis SF**, Yuan H (2017) Functional evaluation of a *de novo GRIN2A* mutation identified in a patient with profound global developmental delay and refractory epilepsy. *Molecular Pharmacology*, 91: 317-330. Doi: 10.1124/mol.116.106781. PMID: 28126851

154. Gao K, Tankovic S, Zhang Y, Kusumoto H, Chen W, XaingWei W, Shaulsky G, Hu C, **Traynelis SF**, Yuan H, Jiang Y (2017) A de novo loss-of-function *GRIN2A* mutation associated with childhood focal epilepsy and acquired epileptic aphasia. *PLOS One* 12(2):e0170818. Doi: 10.1371/journal.pone.0170818. PMID 28182669

155. Chen W, Shieh C, Swanger SA, Tankovic A, Au M, McGuire M, Tagliati M, Graham JM, Madan-Khetarpa S, **Traynelis SF**, Yuan H, Pierson TM (2017) *GRIN1* mutation associated with intellectual disability alters NMDA receptor trafficking and function. *J Human Genetics*, 62: 589-597. PMID: 28228639

156. Liu S, Zhou L, Yuan H, Vieira1 M, Sanz-Clemente A, Badger JD, Lu W, **Traynelis SF**, Roche KW (2017) NMDA receptor C-terminal variants identified in human disease affect receptor localization and synaptic function. *J Neurosci*, 37: 4093-4102. 28283559

157. Platzer K, Yuan H, Schütz H, Chen W, Hu C, Kusomoto H, Helbig KL, Tang S, Willing MC, Tinkle BT, Adams DJ, Depienne C, Keren B, Mignot C, Frengen E, Biskup S, Döcker D, Strom TM, Mefford HC, Myers C, Sadleir L,

Scheffer IE, Brilstra E, Bok LA, Møller RS, Jensen UB, Millichap JJ, Berg AT, Goldberg EM, De Bie I, Fox S, Major P, Jones JR, Zackai EH, Jamra RA, Rolfs A, Leventer R, Lawson J, Roscioli T, Jansen JE, Ranza E, Korff CM, van Haelst MM, van de Smagt JJ, Lehesjoki A-E, Courage C, Linnankivi T, Smith D, Stanley C, Mintz M, McKnight D, Decker A, Tan W-H, Tarnopolsky MA, Lauren BI, Wolff M, Dondit L, Parisotto SE, Heyne HO, DiDonato N, Dobyns WB, Laube B, **Traynelis SF**, Lemke JR (2017) *GRIN2B* encephalopathy – novel phenotypic, genetic and functional aspects. *Journal of Medical Genetics*, 60(13):5556-5585. PMID 28377535.

158. Strong KL, Epplin MP, Bacsa J, Butch CJ, Burger PB, Menaldino DS, **Traynelis SF** , Liotta DC (2017) The structure-activity relationship of a tetrahydroisoquinoline class of N-methyl-D-aspartate receptor modulators that potentiates GluN2B-containing NMDA receptors. *J Med Chem*, 60(13):5556-5585. PMID 28586221.

159. Galtieri D, Estep CM, Wokosin D, **Traynelis SF**, Surmeier DJ (2017) Pedunculopontine glutamatergic neurons control spike patterning in substantia nigra dopaminergic neurons. *eLife*, 6. Pii: e30352. Doi: 10.7554/eLife.30352. PMID: 28980939

160. Yi F, **Traynelis SF**, Hansen KB (2017) Selective Cell-Surface Expression of Triheteromeric NMDA Receptors. *Methods Mol Biol*. 1677:145-162. Doi: 10.1007/978-1-4939-7321-7_7. PMID:28986871

161. Hansen KB, Yi F, Perszyk RE, Menniti FS, **Traynelis SF** (2017) NMDA Receptors in the Central Nervous System. *Methods Mol Biol*. 1677:1-80. Doi: 10.1007/978-1-4939-7321-7_1. PMID: 28986865

162. Yadav R., Dravid SM, Yuan H, **Traynelis SF** (2017) AMPA receptors: Molecular biology, pharmacology. In *New Encycolopedia of Neuroscience* Ed Larry R. Squire, Elsevier Science Limited.

163. Swanger SA, Vance KM, Acker TM, Zimmerman SS, DiRaddo JO, Myers SJ, Bundgaard C, Mosley CA, Summer SL, Menaldino DS, Jensen HS, Liotta DC, **Traynelis SF** (2018). A novel negative allosteric modulator selective for GluN2C/2D-containing NMDA receptors inhibits synaptic transmission in hippocampal interneurons. *ACS Chemical Neuroscience*, doi: 10.1021/acschemneuro.7b00329. [Epub ahead of print]. PMID: 29043770

164. Kaiser TM, Kell SA, Kusumoto H, Shaulsky G, Bhattacharya S, Epplin MP, Strong KL, Miller EJ, Cox BD, Menaldino DS, Liotta DC, **Traynelis SF**, Burger PB (2018) The bioactive protein-ligand conformation of GluN2C-selective positive allosteric modulators bound to the NMDA receptor. *Mol Pharmacol* 93: 141-156 PMID 29242355

165. Fry AE, Fawcett KA, Zelnik N, Yuan H, Thompson BAN, Shemer-Meiri L, Cushion T, Mugalaasi H, H, Sims D, Stoodley N, Chung S-K, Rees MI, Patel CV, Brueton LA, Layet V, Giuliano F, Kerr MP, Banne E, Meiner V, Lerman_Sagie T, Helbig KL, Kofman LH, Knight KM, Chen W, Kanan V, Hu C, Kusomoto H, Zhang J, Swanger SA, Shalusky GH, Mackenzie AB, Mullins JG, Lemke JR, Traynelis SF, Bahi-Buisson N, **Traynelis SF**, Iago HF, Pilz DT (2018) De novo mutations in *GRIN1* cause extensive bilateral polymicrogyria. *Brain*, doi: 10.1093/brain/awx358. PMID: 29365063

166. Singh A, Jenkins MA, Burke KJ, Beck G, Jenkins A, Scimemi A, **Traynelis SF**, Papa SM (2018) Glutamatergic tuning of hyperactive striatal projection neurons controls the motor response to dopamine replacements in parkinsonian primates. *Cell Reports*, 22(4):941-952. Doi: 10.1016/j.celrep.2017.12.095. PMID 29386136.

167. Fernández-Marmiesse A, Kusumoto H, Rekarte S, Roca I, Myers SJ, **Traynelis SF**, Couce ML, Gutierrez-Solana L, Yuan H. (2018) A novel missense mutation in GRIN2A causes a nonepileptic neurodevelopmental disorder. *Movement Disorders*, doi: 10.1002/mds.27315. [Epub ahead of print] PMID 29644724

168. Benke T, **Traynelis SF** (2018) AMPA-type glutamate receptor conductance changes and plasticity: still a lot of noise. *Neurochemical Research*, doi: 10.1007/s11064-018-2491-1. [Epub ahead of print] PMID 29476449.

169. Bhattacharya S, Dunn AR, Bradner JM, Miller GW, **Traynelis SF**, Wichmann T (2018) NMDA receptor blockade ameliorates abnormalities of spike firing of subthalamic nucleus neurons in a parkinsonian nonhuman primate. *Journal of Neuroscience Research*, doi: 10.1002/jnr.24230. [Epub ahead of print] PMID 29577359.

170. Regan MC, Grant T, McDaniel MJ, Karakas E, Zhang J, **Traynelis SF**, Grigorieff N, Furukawa H (2018) Structural Mechanism of Functional Modulation by Gene Splicing in NMDA Receptors. *Neuron* 98: 521-529.e3. doi: 10.1016/j.neuron.2018.03.034. PMID 29656875

171. Bhattacharya S, Khatri A, Swanger SA, Schaulsky G, Kusumoto H, Hansen KB, Yuan H, **Traynelis SF.** (2018) Unique pharmacological, functional, and trafficking properties of triheteromeric GluN1/GluN2A/GluN2C NMDARs: GluN2C Seldom See the Surface Alone in Cerebellar Granule Cells. *Neuron, Manuscript in press.*

172. Perzsyk RP, Katzmann B, Liotta DC, **Traynelis SF** (2018) A site for positive and negative allosteric modulation of NMDA receptors. *eLife*, 7. Pii: e34711. Doi: 10.7554/eLife.34711. PMID: 29792594.

173. Wells G, Yuan H, McDaniel MJ, Kusumoto H, Snyder JP, Liotta DC, **Traynelis SF** (2018) The GluN2B-Glu413Gly NMDA receptor variant arising from a de novo GRIN2B mutation promotes ligand-unbinding and domain opening. *Proteins, Structure, Function and Bioinformatics, Manuscript provisionally accepted.*

174. Gibb A, Ogden KK, McDaniel MJ, Vance KM, Kell SA, Butch C, Burger P, Liotta DC, **Traynelis SF** (2018) A structurally-derived model of subunit-dependent NMDA receptor function. *J Physiol, Manuscript in press*.

175. Swanger SA, **Traynelis SF** (2018) Synaptic receptor diversity revealed across space and time. *TINS, Manuscript in press.*

176. Hanson E, Armbruster M, Lau LA, Sommer ME, Swanger SA, **Traynelis SF**, Moss SJ, Chadchankar J, Dulla CG (2018) Tonic activation of GluN2C/GluN2D-containing NMDA receptors by ambient glutamate facilitates cortical interneuron maturation. *J Neurosci Manuscript submitted.*

177. Hansen KB, Yi F, Perszyk RE, Furukawa H, Wollmuth LP, Gibb AJ, **Traynelis SF** (2018) Structure, function, and allosteric modulation of NMDA receptors. *J Gen Physiol. Manuscript submitted.*

178. Yi F, Bhattacharya S, Thompson CM, Traynelis SF, Hansen KB (2018) Functional and pharmacological properties of triheteromeric GluN1/2B/2D NMDA receptors. *Manuscript submitted.*

179. Strong KL, Epplin MP, Perszyk RE, McDaniels MJ, Kusumoto H, Ogden KK, Huettner J, Liotta DC, **Traynelis SF** (2018) Positive allosteric modulation of agonist potency and efficacy for N-Methyl-D-Aspartate receptors. *Manuscript in preparation.*

180. Garnier-Amblard EC, Fernàndez-Cuervo G, Ogden KK, Yuan H, Yuan L, Zhang J, Le P, Liotta DC, Liebeskind LS, **Traynelis SF** (2018) Structure-activity relationship studies of 2-benzamido thiophene analogues as novel negative or positive subunit-selective allosteric modulators of NMDA receptors *Manuscript in preparation.*

Invited Commentaries

181. Traynelis SF, Lipton SA (2001). Is tissue plasminogen activator a threat to neurons? *Nature Medicine* 6:13-14. PMID: 11135603

182. Traynelis SF, Chesler M (2001). Proton release as a modulator of presynaptic function. *Neuron* 32: 960-961. PMID: 11754826

183. Banke TG, **Traynelis SF** (2003). Response: NMDA receptor subunit gating – uncovered. *TINS* 27:10.

184. Kristensen A, **Traynelis SF** (2005) An intrusive chaperone. *Nature* 435: 1042-1043. PMID: 15973396

185. McBain CJ, **Traynelis SF** (2006) Malevolent lurkers no more: NMDA receptors come of age. *J Physiol* 575: 317-318. PMID: 16809360

186. Mannaioni G, Yuan H, Lee CJ, **Traynelis SF**. (2008) Are astrocytes really "stars"? *Physiology News* 70: 31-33.

187. Gyoneva S, Orr AG, **Traynelis SF** (2009) Differential regulation of microglial motility by ATP/ADP and adenosine. *Parkinsonism Relat Disord* 15 Suppl 3 S195-9. PMID: 20082989

188. Wollmuth L, **Traynelis SF** (2009) Excitatory view of a receptor. *Nature* 462: 729-731. PMID: 20010675

189. Chesler M, **Traynelis SF** (2010) Acid sense and sensibility in the amygdala. *Cell Science Commentary*.

190. Traynelis, SF, Choi DW (2010) DAPK1 and GluN2B – a deadly link. *Cell Science Commentary*.

191. Hansen BK, **Traynelis SF** (2011). How glutamate receptors subunits mix and match: Details uncovered. *Neuron*. 71(2):198-200

192. Traynelis, SF, Wollmuth, LP, Hansen KB (2012) Structure-function correlates of glutamate-gated ion channels in "Comprehensive Biophysics", Elsevier (ed E. Egelman).

193. Traynelis, SF (2012). Editors Note: Technological advances and a molecular understanding of pharmacology. *Mol Pharmacol* 81(1):1-2

194. Wyllie DJA, **Traynelis SF** (2012) NMDA receptor permeation: a light in the tunnel. *Nature Neuroscience*, 15: 343-4 PMID: 22362102.

195. Hansen BK, **Traynelis SF** (2014) Glutamate receptors: Mechanistic twists and turns. *Nature Chemical Biology* 10: 698-699.

196. Heller Brown J, Catterall W, Conn PJ, Cull-Candy SG, Dingledine R, Harden TK, Insel PA, Milligan G, **Traynelis SF** (2015) The first 50 years of Molecular Pharmacology. *Mol Pharmacol* 88: 139-140.

197. Keen JR, Swanger SA, **Traynelis SF**, Olson JJ (2016) Editorial on the original article entitled "SLC7A11 expression is associated with seizures and predicts poor survival in patients with malignant glioma" *Annals of Translational Medicine*, 4(suppl): S18 PMID 27867986.

Bibliography (Abstracts)

1. Harden TK, Petch LA, **Traynelis SF** (1985). Agonist-induced change in the membrane form of muscarinic cholinergic receptors (MR) in astrocytoma cells. *Fed. Proc.* 44: 1626.

2. Traynelis SF, Dingledine R (1986). Prolonged seizure-like discharges in hippocampal CA1 neurons in vitro are triggered by spontaneous interictal bursts originating in the CA3 region. *Soc. Neurosci. Abstr.* 12: 74.

3. Traynelis SF, Dingledine R (1987). Possible mechanism for the transition from interictal to ictal activity in hippocampal slices bathed in high external potassium. *Soc. Neurosci. Abstr.* 13: 364.

4. Traynelis SF, Dingledine R (1988). Spontaneous electrographic seizures in hippocampal slices bathed in high external potassium media are suppressed by hyperosmotic media. *Neurosci. Lett.*(Suppl.) 32: S36.

5. Traynelis SF, Dingledine R (1988). Spontaneous high $[K^+]$-induced electrographic seizures in hippocampal slices are suppressed by hyperosmotic media. *Soc. Neurosci. Abstr.* 14: 471.

6. Kawasaki K, **Traynelis SF**, Dingledine, R (1988). Hypoxia-induced electrographic seizures in rat hippocampal slices. *Soc. Neurosci. Abstr.* 14: 1129.

7. Traynelis SF, McBain CJ, Dingledine R (1989). Seizure susceptibility in hippocampal slices: relation to regional variation in extracellular space. *Soc. Neurosci. Abstr.* 15: 702.

8. Traynelis SF, Cull-Candy SG (1990). Proton inhibition of NMDA receptor-mediated responses in rat cultured cerebellar granule neurones. *J. Physiol.* 423: 93P.

9. McBain CJ, **Traynelis SF**, Dingledine R (1990). Regional variation in extracellular volume fraction in the hippocampus. *J. Physiol.* 426: 49P.

10. Traynelis SF, Silver RA, Cull-Candy SG (1991). Non-stationary current-variance analysis of glutamate receptor-mediated EPSCs at the mossy fiber-granule cell synapse. *Soc. Neurosci. Abstr.* 17: 1332.

11. Wyllie DJA, **Traynelis SF**, Cull-Candy SG (1992). Multiple non-NMDA glutamate receptors in rat cerebellar granule neurones in explant cultures. *J. Physiol.* 446: 178P.

12. Silver RA, **Traynelis SF**, Cull-Candy SG (1992). Excitatory currents at the mossy fibre-granule cell synapse in thin cerebellar slices. *J. Physiol.*, 446: 177P.

13. Traynelis SF, Silver RA, Cull-Candy SG (1992). Estimated conductance of synaptic glutamate channels activated during EPSCs in rat cerebellar granule cells in thin slices. *J. Physiol.* 452: 183P.

14. Miller B, Sarantis M, **Traynelis SF**, Attwell D (1992). Arachidonic acid potentiates NMDA receptor currents in rat cerebellar granule cells. *Neurosci. Lett.*, 42: S9.

15. Pulchalski RB, Brose N, Louis J-C, **Traynelis SF**, Egebjerg J, Lin F, Kukekov V, Wenthold R, Rogers SW, Moran T, Morrison JH, Heinemann SF (1993). Assembly of native glutamate receptors into structurally and functionally distinct heteromeric channels. *Soc. Neurosci. Abstr.* 19: 71.

16. Traynelis SF, Heinemann SF (1993). Proton sensitivity of recombinant NMDA receptor subunits. *Soc. Neurosci. Abstr.* 19: 1359.

17. Pulchalski RB, Louis J-C, **Traynelis SF**, Egebjerg J, Lin F, Sharma G, Heinemann SF Regulation of glutamate receptor expression. (1993). *Epilepsia* 34, Suppl. 6: 77.

18. Traynelis SF, Heinemann SF (1994). Polyamines potentiate recombinant NMDA receptors by relieving proton inhibition. *Soc. Neurosci. Abstr*. 20: 236.

19. Traynelis SF, Heinemann SF (1994). Regulation of NMDA receptor function by protons and polyamines. *Epilepsia* 35, Suppl. 8: 27.

20. Bulter MA, Levey AI, **Traynelis SF** (1995). Surface accessibility of NMDA receptor alternative exon5 determined by engineered protease recognition sites. *Soc. Neurosci. Abstr*. 21: 78.

21. Chung DS, Joshi DS, **Traynelis SF**, Murphy TJ, Conn PJ (1995). Effects of 4-bromohomoibotenic acid and 4-methylhomoibotenic acid on cloned metabotropic glutamate receptors. *Soc. Neurosci. Abstr*. 21: 614.

22. Butler MA, Powers JL, **Traynelis SF** (1995). A function-modulating alternatively spliced exon of the NMDA receptor is surface accessible. *Abstract presented to the Southeastern Pharmacological Society*.

23. Powers JL, **Traynelis SF** (1995): Structural determinants of voltage-dependent polyamine inhibition of NMDA receptors. *Abstract presented to the Southeastern Pharmacological Society*.

24. Mott DM, **Traynelis SF** (1996). Desensitization properties of rodent recombinant 5HT3 receptors. *Biophysical Journal* 70: A404.

25. Burgess MF, Powers JL, **Traynelis SF** (1996). Asparagine_{616} in the NR1 subunit controls spermine block, spermine potentiation, and pH sensitivity. *Soc. Neurosci. Abstr*. 22: 588

26. Traynelis SF, Mott DD (1996). Recombinant 5-HT3 receptor activation and desensitization. *Soc. Neurosci. Abstr*. 22: 1781

27. Wahl P, Mott DD, **Traynelis SF** (1996). The probability of opening of homomeric GluR6 receptors. *Soc. Neurosci. Abstr*. 22: 1540.

28. Butler MA, **Traynelis SF** (1996). Native and recombinant NMDA receptors are cleaved by the serine protease thrombin. *Soc. Neurosci. Abstr*. 22: 1761

29. Traynelis SF Wahl P (1997). Control of GluR6 receptor activation by PKA and calcineurin. *Biophyical Journal*. 72: A32

30. Traynelis SF, Mott D (1997). Desensitization and deactivation kinetics of recombinant 5-HT3 channels. *Soc. Neurosci. Abstr*. 23: 975.

31. Zheng F, Gingrich MB, **Traynelis SF,** Conn PJ (1997). Modulation of recombinant NMDA receptor by non-receptor tyrosine kinase src in HEK293 cells. *Soc. Neurosci. Abstr*. 23: 1392.

32. Burgess MF, **Traynelis SF** (1997). NMDA receptor inhibition by Zn^{2+} is regulated by subunit composition. *Soc. Neurosci. Abstr*. 23: 945.

33. Gingrich MB, Ciliax NF, **Traynelis SF** (1997). Thrombin treatment of cultured hippocampal neurons attenuates Mg^{2+} block of the NMDA receptor. *Soc. Neurosci. Abstr*. 23: 947.

34. Gingrich MB, Rouse ST, Marino MJ, Conn PJ, **Traynelis SF** (1998) Potentiation of neuronal and recombinant NMDA receptors by activation of the thrombin receptor PAR1 in Xenopus oocytes and rat hippocampal slices. J. Physiol. 507.P, 26P.

35. Banke T, **Traynelis SF** (1998). Control of GluR1 activation by cAMP-dependent protein kinase. *Soc. Neurosci. Abstr*. 24, 1272

36. Gingrich MB, **Traynelis SF** (1998). Protease activated receptor-1 potentiation of NMDA receptor function is Mg^{++} dependent. *Soc. Neurosci. Abstr*. 24, 1271.

37. Zheng F, **Traynelis SF,** Conn PJ (1998). Reduction of zinc sensitivity of recombinant NR1/NR2A and NR1/NR2B receptors by non-receptor tyrosine kinase src. *Soc. Neurosci. Abstr*. 24, 1271.

38. Mott DD, Doherty JJ, Zhang S, Lyuboslavsky P, **Traynelis SF**, Dingledine R (1998). Phenylethanolamines inhibit NMDA receptors by potentiating proton inhibition: implications for novel neuroprotective strategies. *Soc. Neurosci. Abstr*. 24, 95.

39. Junge C, Mannaioni G, Gingrich MB, **Traynelis SF** (1999). Plasmin and thrombin regulation of NMDA receptor function. *Soc. Neurosci. Abstr.* 25: 1979.

40. Bowie D, Banke TG, **Traynelis SF** (1999) Bi-directional regulation of AMPA receptor activity by calcineurin and protein kinase A. *Soc. Neurosci. Abstr.* 25: 1238.

41. Traynelis SF, Mott DD (1999). Divalent cations speed the kinetics of recombinant 5-HT3 receptor channels. *Soc. Neurosci. Abstr*. 25: 1205.

42. Low C-M, Lyuboslavsky P, Marchan E, **Traynelis SF** (1999). Structural basis of zinc and proton inhibition of NMDA receptors. *Soc. Neurosci. Abstr.* 25: 1714.

43. Zheng F, Conn PJ, **Traynelis SF** (1999). Zinc-dependent desensitization of NR1/NR2A receptors. *Soc. Neurosci. Abstr.* 25: 24.

44. Junge CE, Betarbet P, Lyuboslavsky P, Greenamyre JT, **Traynelis SF** (2000). Protease activated receptor 1 (PAR1) protein localization in rat and mouse brain. *Soc. Neurosci. Abstr.* 26: 1814.

45. Mannaioni G, Alagarsamy S, Conn PJ, **Traynelis SF** (2000). Protease activated receptor-1 (PAR1) activation and hippocampal function. .*Soc. Neurosci. Abstr.* 26: 1814.

46. Low CM, Zheng F, Lyuboslavsky P, **Traynelis SF** (2000). The apparent high-affinity zinc inhibition of NR1/NR2A receptor is due to enhancement of proton inhibition. *Soc. Neurosci. Abstr.* 26: 1406.

47. Bowie D, **Traynelis SF** (2000) Permeant ions regulate the gating kinetics of kainate receptors. *Soc. Neurosci. Abstr.* 26: 1134.

48. Banke TG, **Traynelis SF** (2001). Activation of individual NMDA receptor channels. *Gordon Conference*

49. Erreger K, Zheng F, **Traynelis SF** (2001). An allosteric interaction between the glutamate and zinc binding sites causes fast desensitization of NR1/NR2A NMDA receptors. *Soc. Neurosci. Abstr.* 27, 703:15.

50. Bowie D, **Traynelis SF** (2001). How does concanavalin-A modulate kainate receptors. *Soc. Neurosci. Abstr.* 27: 480.10.

51. Junge CE, Low CM, **Traynelis SF** (2001). The serine protease plasmin cleaves the N-terminal (LIVBP) domain of the NR2A subunit of the NMDA receptor. *Soc. Neurosci. Abstr.* 27: 867.6.

52. Banke TG, **Traynelis SF** (2001). Gating kinetics of individual NMDA receptors studied in excised membrane patches. *Soc. Neurosci. Abstr.* 27, 703:6.

53. Mannaioni G, Marino M, **Traynelis SF**, Conn PJ (2001). mGluR1 and mGluR5 play different roles in regulation of CA1 pyramidal cell function. *Soc. Neurosci. Abstr.* 27, 493.6.

54. Lyuboslavsky P, Thiel B, Paoletti P, Neyton J, Zheng F, **Traynelis SF** (2001). Control of NMDA receptor proton sensitivity by extracellular residues in the linker region of S2 domain of the NR2 subunit. *Soc. Neurosci. Abstr.* 27, 703.16.

55. LePage KT, Murray TF, Ishmael JE, Low CM, **Traynelis SF**, Murray T(2001) Differential binding properties of [H-3]dextrorphan and [H-3]MK-801 in heterologously expressed NMDA receptors. FASEB J 15 : A225-A225

56. Nicole O., **Traynelis SF,** McKeon R (2002). Implication of protease activating receptor type 1 (PAR-1) in glial scar formation *Soc Neurosci. Abstr* 28.

57. Erreger K, **Traynelis SF** (2002). Zinc and protons similarly modulate single channel kinetics of NMDA receptors. *Soc Neurosci. Abstr* 28.

58. Olson E, Lyuboslavsky P, McKeon R, **Traynelis SF** (2002). Protease activated receptor-1 (PAR-1) knockout mice are protected against neuronal damage following hypoxia-ischemia. *Soc Neurosci. Abstr* 28.

59. French A, Le P, Lyubsolvsky P, Wyatte K, Low CM, Williams K, **Traynelis SF**, Zheng F. (2002). Control of NMDA receptor proton sensitivity by residues in the lurcher motif. *Soc Neurosci. Abstr* 28.

60. Lee CJ, Rong J, Junge CE, Hamill C, Mannaioni G, **Traynelis SF** (2002). Expression and function of PAR1 in dentate region of mouse hippocampus. *Soc Neurosci. Abstr* 28.

61. Banke T, **Traynelis SF** (2002). Activation of NMDA receptors involves multiple subunit-associated gates. *Soc Neurosci. Abstr* 28.

62. Junge CE, Sugawara T, Brat DJ, Chan PH, **Traynelis SF** (2002). A Role for Protease Activated Receptor-1 (PAR1) in Neuronal Damage caused by Transient Focal Ischemia. *Soc Neurosci. Abstr* 28.

63. Poisik O, Mannaioni G, **Traynelis S**, et al. (2002) Distinct functions of group I metabotropic glutamate receptors 1 and 5 in the rat globus pallidus. Neuropharmacol. 43: 113

64. Sorenson SD, Nicole O, Peavy RD, Montoya LM, **Traynelis SF**, Hepler JR (2003). Signaling mechanisms for PAR-1 and lysophospholipid-mediated proliferation in astrocytes. FASEB/ASPET Abstract.

65. Nicole O, Sorenson SD, Hepler J, Brat D, McKeon R, **Traynelis SF** (2003). Expression and role or protease activating receptor type I (PAR-1) in glial scar formation. *Soc. Neurosci. Abstr.* 29.

66. Wong ESP, Ng FM, Yu CY, Lim LH, Goh SK, **Traynelis SF**, Low C-M (2003). Expression, purification, and biochemical characterization of the amino terminal extracellular domains of the N-methyl-D-aspartate (NMDA) receptor. *Soc. Neurosci. Abstr*. 29.

67. Kristensen AS, Banke TG, **Traynelis SF** (2003) Effects of CaM-KII phosphorylation on homomeric GluR1 AMPA receptor activation. *Soc. Neurosci. Abstr*. 29.

68. Erreger K, Wyllie DJA, Banke TG, Lee CJ, **Traynelis SF** (2003) Activation of NR1/NR2A and NR1/NR2B NMDA receptors *Soc. Neurosci. Abstr*. 29.

69. Lyuboslavsky PN, Lee CJ, Le PN, Kostrzewa A, **Traynelis SF** (2003) Characterization of partial agonists at the glutamate binding site of the NR2A, NR2B, NR2C, and NR2D NMDA receptor subunits *Soc. Neurosci. Abstr*. 29.

70. Lee CJ, Mannaioni G, Junge CE, **Traynelis SF** (2003) Potentiation of synaptic NMDA receptors by activation of PAR1. *Soc. Neurosci. Abstr*. 29.

71. Hammill CE, Mannaioni G, Nicole OS, Sastre AA, **Traynelis SF** (2003). Role of protease-activated receptor 1 (PAR1) in NMDA-induced toxicity in the striatum. *Soc. Neurosci. Abstr*. 29.

72. Banke TG, Jin R, Mayer ML, **Traynelis SF**, Gouaux E (2003). Single channel and crystallographic studies on GluR2. Glutamate Receptors / Gordon Conference, 2003.

73. Lee CJ, Mannaioni G, Hamill CE, Gingrich MB, **Traynelis SF** (2004) Activation of thrombin receptor PAR1 on astrocytes potentiates NMDA receptors on neurons via Ca2+-activated Chloride Channels. *Gordon Conference.*

74. Lyuboslavsky P, Almonte AG, Nicholson KL, Balster RL, **Traynelis SF** (2004) Neuroprotective and anticonvulsant effects of MK801 stereoisomers. *Soc Neurosci. Abstr. 30*

75. Washburn MS, Altas Y, Lyuboslavsky P, Le P, French A, Snyder JP, Liotta DC, Irier H, Dingledine R, **Traynelis SF** (2004). Neuroprotection by a novel class of NR2B-selective NMDA receptor antagonists. *Soc Neurosci. Abstr. 30*

76. Erreger K, Chen PE, Lee CJ, Wyllie DJA, **Traynelis SF** (2004) The S1 region of NR2 controls the subunit-specific activation of NMDA receptors by SYM2081. *Soc Neurosci. Abstr. 30*

77. Lee CJ, Dravid SM, **Traynelis SF** (2004) Glutamate permeation through Ca2+ activated anion channels expressed in astrocytes. *Soc Neurosci. Abstr. 30*

78. Goldschmidt A, Semwogerere D, Weeks ER, **Traynelis SF** (2004). Protease-activated receptor-2 stimulates murine astrocytic calcium mobilization and microglial surface remodelling. *Soc Neurosci. Abstr. 30*

79. Dravid SM, Lyuboslavsky P, French A, Murray TF, **Traynelis SF** (2004). Stereo-selective coupling of MK-801 block of NMDA receptors to proton sensitive gating. *Soc Neurosci. Abstr. 30*

80. Hamill CE, Caudle WM, Richardson JR, Miller GW, **Traynelis SF** (2004). Role for protease-activated receptor-1 (PAR-1) in MPTP-induced dopaminergic neurotoxicity. *Soc Neurosci. Abstr. 30*

81. Yuan H, Erreger K, Le P, **Traynelis SF** (2004) Covalent modification of an engineered cysteine in M3 locks open NMDA channels. *Soc Neurosci. Abstr. 30*

82. **Traynelis SF**, Dravid SM, Erreger K, Wyllie DJA (2004). Open probability and response properties of individual NR1/NR2A NMDA activated by synaptic-like concentration jumps in outside-out patches. *Soc Neurosci. Abstr. 30*

83. Mannaioni G, Lee CJ, Junge CE, Hamill CE, **Traynelis SF** (2004) Plasmin-induced PAR1 activation increases $[Ca^{2+}]_i$ in cultured astrocytes and potentiates NMDA receptor current in CA1 pyramidal neurons. *Soc Neurosci. Abstr. 30*

84. Chen PE, Johnson AR, Stansfeld PJ, Jacob AL, Snyder JP, **Traynelis SF**, Wyllie DJA (2004). Structural features of the glutamate binding site in recombinant NR1A/NR2A NMDA receptors determined by site directed mutagenesis and molecular modelling. *Soc Neurosci. Abstr. 30*

85. Almonte AG, Lee CJ, **Traynelis SF** (2004). The role of Ca2+ homeostasis and Ca2+ activated ion channels in migration and invasion of U178MG, a human glioblastoma cell line. *Soc Neurosci. Abstr. 30*

86. Ng FM, Wong ESP, **Traynelis SF**, Low C-M (2004). Analysis of the NR2B subunit amino-terminal domain structure of NMDA receptor by circular dichroism. *Soc Neurosci. Abstr. 30*

87. Lim LH, Anthony N, Chen JT, **Traynelis SF**, Low C-M (2004) Serine proteases thrombin and tissue-plasminogen activator cleave the N-terminal (ATD) domain of the NR2B subunit of the NMDA receptor. *Soc Neurosci. Abstr. 30*

88. Lee CJ, **Traynelis SF,** Lee JM (2004) Use of ChanneLab and Mini Analysis software for teaching neurophysiology. *Soc Neurosci. Abstr. 30*

89. Ng F-M, Lim P-Q, Gaballe M, Snyder JP, **Traynelis SF**, Low C-M (2005) Structural insights into binding of phenylethanolamines to the amino terminal domain of NR2B subunit of NMDA receptors. *Soc Neurosci. Abstr. 31*

90. Goldshmidt A, **Traynelis SF** (2005) Real-time analysis of rapid microglial remodeling induced by protease-activated receptor-2. *Soc Neurosci. Abstr. 31*

91. **Traynelis SF**, Erreger K, Lee CJ, Chen PE, Le P, Lyuboslavsky PN, Wyllie DJA (2005) Subunit-specific agonist activity for glutamate analogs at NR2A, NR2B, NR2C, and NR2D NMDA subunits. *Soc. Neurosci. Abstr. 31*

92. **Traynelis SF**, Lee CJ, Lee JM (2005) Use of ChanneLab software for teaching receptor theory and synaptic function. *Soc Neurosci. Abstr. 31*

93. Yuan H, Erreger K, Dravid SM, **Traynelis SF** (2005). Single Channel Properties and Differential Effect of Channel Blockers after MTSEA-Modification of A7C Mutant NMDA Receptors. *Soc.Neurosci.Abstr.31.*

94. Kristensen AS, **Traynelis SF** (2005). Mutational Analysis of the NR2A subunit: Identification of Structural Determinants for Allosteric Coupling between Zn^{2+}, H^{+}, and Glutamate *Soc Neurosci. Abstr. 31.*

95. Almonte AG, Wingo TS, White DA, Gu B, Hoffman SW, Stein DG, Holtzman SG, **Traynelis SF** (2005). Characterization of the behavioral phenotype of the protease activated receptor-1 (PAR-1) knockout mouse. *Soc. Neurosci. Abstr. 31.*

96. Hamill CE, Goldshmidt A, Yuan H, Gearing M, Rees HD, **Traynelis SF** (2005). Expression and localization of protease-activated receptors in human basal ganglia. *Soc. Neurosci. Abstr. 31.*

97. Dravid SM, **Traynelis SF** (2005). Activation of NR1/NR2C NMDA receptors. *Soc. Neurosci. Abstr. 31.*

98. Lyuboslavsky PN, Kristensen AS, Dravid SM, Erreger K, **Traynelis SF** (2005) Mutational Analysis of the NR2A subunit: Identification of Structural Determinants for Allosteric Coupling between Zn^{2+}, H^{+}, and Glutamate. *Soc. Neurosci. Abstr. 31.*

99. Mannaioni G, Dravid SM, Lee, CJ, **Traynelis SF** (2005). PAR-1 activation increases the time course of glutamate at the synaptic cleft. *Soc. Neurosci. Abstr. 31.*

100. Hamill CE, Caudle WM, Richardson JR, Miller GW, **Traynelis SF** (2005). Diminished microglial response in PAR1 knockout mice in response to MPTP. FENS Summer School "Neuro-glia interaction in aging and disease." FENS Meeting, July 2005.

101. Geballe MT, Erreger K, Lee CJ, **Traynelis SF,** Snyder JP (2006). Understanding agonism in the NMDA receptor: comparing NR2A and NR2D using MD. *American Chemical Society Meeting*.

102. Goldshmidt A, **Traynelis SF**. (2006) Four-Dimensional Imaging Reveals Effects of PAR-2 Agonists on Cell Morphology and Process Motility in Primary Microglia. *Soc. Neurosci. Abstr. 32.*

103. Dravid SM, Mannaioni G, **Traynelis SF**. (2006) Activation of astrocytic G-protein coupled receptors modulate time course of glutamate in the synaptic cleft. *Soc. Neurosci. Abstr. 32.*

104. Hamill CE, Goldshmidt A, **Traynelis SF**. (2006) Pharmacological characterization of protease-activated receptor-2 agonists. *Soc. Neurosci. Abstr. 32.*

105. Yuan H, Junge CE, Low C-M, **Traynelis SF**. (2006) Cleavage of N-terminal domain of the NR2A subunit by plasmin relieves tonic zinc inhibition of the *N*-methyl-D-aspartate receptor. *Soc. Neurosci. Abstr. 32.*

106. Geballe M, Kristensen AS, Erreger K, Chen PE, Lyuboslavsky P, Le P, Wyllie DJA, Snyder J, **Traynelis SF.** (2006) Agonist binding to NR2A and NR2D NMDA receptor subunits. *Soc. Neurosci. Abstr. 32.*

107. Woo D, Yuan H, Kristensen A, **Traynelis SF**, Cheong E, Lee CJ (2006). Sniffer-patch quantification of Ca^{2+}-dependent release of glutamate at submicromolar concentration from mouse cortical astrocytes. *Soc. Neurosci. Abstr. 32.*

108. **Traynelis SF**, Erreger K (2006). Zinc Inhibition of NR1/NR2A N-Methyl-D-Aspartate Receptor. *Soc. Neurosci. Abstr. 32.*

109. Myers SJ, Geballe MT, Le P, Lyuboslavsky P, Dingledine R, Snyder JP, **Traynelis SF.** (2006). pH-dependence of phosphono-derivative NMDA receptor antagonists. *Soc. Neurosci. Abstr. 32.*

110. Chen PE, Erreger K, Livesey M, **Traynelis SF**, Wyllie DJA. (2006). Glycine potency among recombinant *N*-methyl-D-aspartate receptor subtypes is influenced by the S2 glutamate binding region of the NR2 subunit. FENS Meeting, July 2006.

111. Dravid SM, Geballe M, Snyder JP, **Traynelis SF** (2007) Residues at dimer interface of NR1/NR2C ligand binding domain controls the relative efficacy of D-cycloserine. *Soc. Neurosci. Abstr. 32.*

112. Geballe MT, Hansen KB, Erreger K, Lee CJ, Kristensen AS, Chen PE, Wyllie DJA, Snyder JP, **Traynelis SF** (2007) Subunit-specific binding and agonist activity of glutamte and SYM2081 at NR2A and NR2D containing N-methyl-D-aspartate glutamate receptors. *Soc. Neurosci. Abstr. 33.*

113. Hansen KB, LeVasseur N, Kristensen AS, Naur P, Kastrup JS, **Traynelis SF** (2007) Modulation of GluR-delta2 function by extracellular calcium. *Soc. Neurosci. Abstr. 33.*

114. Yuan H, Hansen KB, **Traynelis SF** (2007) Amino terminal domain of NR2 subunits controls channel open probability of the N-methyl-D-aspartate receptor. *Soc. Neurosci. Abstr. 33.*

115. LeVasseur N, Hansen KB, kristensen AS, Naur P, Kastrup JS, **Traynelis SF** (2007) Identification of ligands capable of modulating the activity of the orphan glutamate like receptor GluR-delta2 Lurcher mutant. *Soc. Neurosci. Abstr. 33.*

116. Vance K, Hansen KB, Micale N, Clausen RP, **Traynelis SF** (2007) Subunit-specific activation of N-methyl-D-aspartate receptor subtypes by analogs of N-hydroxypyrazole-5-glycine (NHP5G). *Soc. Neurosci. Abstr. 33.*

117. Myers SJ, Tahirovic YA, Geballe M, Gruszecka-Kowalik E, Washburn M, Lyuboslavsky P, Phuong Le, French A, Irier H, Choi W-B, Easterling K, McNamara JO, Dingledine R, Liotta DC, **Traynelis, SF**, Snyder JP (2007) Novel enantiomeric propanolamines as therapeutically relevant NR2B-selective NMDA receptor antagonists. *Soc. Neurosci. Abstr. 33.*

118. Smith J, **Traynelis SF**, Moore C, Piser T (2008) Activation of homomeric alpha 7 nicotinic acetylcholine receptors. Biophysical Soc Abstract.

119. McCoy KL, Waters JP, **Traynelis SF**, Hepler JR (2008) RGS protein regulation and signaling diversity of protease-activated receptors (PAR1 and PAR2). Experimental Biology.

120. Makinson CD, Geballe MT, Le P, Mosley CA, Tahirovic YA, Snyder JP, Liotta D, **Traynelis SF** (2008) Mapping binding modes of NMDA modulators at the NR2B subunit. *Soc. Neurosci. Abstr. 34.*

121. Nicholson KL, Tahirovic YA, Myers S, Lyuboslavsky P, Levin E, Le P, Snyder JP, Dingledine R, Liotta D, Balster RL, **Traynelis SF** (2008) The behavioral effects of novel enantiomeric propanolamines that are NR2B-selective NMDA antagonists. *Soc. Neurosci. Abstr. 34.*

122. Vance K, Hansen KB, **Traynelis SF** (2008) Activation of recombinant rat NR1/NR2D NMDA receptors. *Soc. Neurosci. Abstr. 34.*

123 . Junge CE, Yuan H, Vance K, Low C-M, Geballe MT, Snyder JP, Hepler JR,. **Traynelis SF** (2008) The serine protease plasmin cleaves the NR2A subunit to reduce Zn^{2+}-inhibition of the N-methyl-D-aspartate receptor. *Soc. Neurosci. Abstr. 34.*

124. Yuan H, Hansen KB, **Traynelis SF** (2008) The amino terminal domain of the NR2 subunit controls the deactivation time course and the open probability of *N*-methyl-D-aspartate receptors. *Soc.Neurosci. Abstr. 34.*

125. Vance KM, Hansen KB, **Traynelis SF** (2008) NR2 ligand-specific deactivation of NR1/NR2A and NR1/NR2D *N*-methyl-D-aspartate (NMDA) receptors. *Soc. Neurosci. Abstr. 34.*

126. Hansen KB, Naur P, LeVasseur N, Kristensen AS', Kastrup JS, **Traynelis SF** (2008). Modulation of the dimer interface at ionotropic glutamate-like receptor δ2 by extracellular calcium. *Soc. Neurosci. Abstr. 34.*

127. MullasserilP, Mosley C, Hansen KB, Yuan H, Kurtkaya NL, Vance KM, Orr A, Haustein K, Le P, Wilson L, Liotta D, **Traynelis SF** (2008) Quinazolin-4-one derivatives – a novel class of non competitive N-Methyl-D-Aspartate Receptor antagonists. *Soc. Neurosci. Abstr. 34.*

128. Vance KM, **Traynelis SF** (2009) Ligand-specific deactivation time courses of recombinant NR1/NR2D NMDA receptors. *Soc. Neurosci. Abstr. 35.*

129. Yuan H, Hansen KB, Vance KM, Ogden KK, **Traynelis SF** (2009) The amino terminal domain of the NR2 subunit controls activation properties of *N*-methyl-D-aspartate receptors. *Soc. Neurosci. Abstr. 35.*

130. Kvist T, Mullasseril P, Hansen KB, Kurtkaya NL, Yuan H, Vance KM, Orr AG, Le P, Vellano KM, Lewis I, Kurtkaya S, Du Y, Qui M, Bräuner-Osborne H, **Traynelis SF** (2009) Novel NMDA receptor antagonists identified using a cell-based screening assay for allosteric modulators of NR2D-containing NMDA receptors. *Soc. Neurosci. Abstr. 35.*

131. Hansen KB, Burger P, Vance KM, Snyder JP, Clausen RP, **Traynelis SF** (2009) Structural basis for subunit-specific activation of NMDA receptors. *Soc. Neurosci. Abstr. 35.*

132. Ogden KK, Moore C, Smith JS, Piser TM, **Traynelis SF** (2009) Open probability of human α7 nicotinic acetylcholine receptors is dependent on the number of subunits bound to acetylcholine *Soc.Neurosci.Abstr 35.*

133. Lyuboslavsky PN, Tahirovic YA, Myers SJ, Snyder JP, Liotta DC, Dingledine R, **Traynelis SF** (2009) Neuroprotection by pH-dependent NR2B receptor antagonists: Proof of concept study *Soc.Neurosci.Abstr. 35.*

134. Vance KM, Hansen KB, Ogden KK, **Traynelis SF** (2010) Activation of recombinant rat GluN1/GluN2A and GluN1/GluN2D NMDA receptors. *Biophysical Society annual meeting.*

135. Kvist T, Greenwood JR, Hansen KB, Clausen RP, **Traynelis SF**, Bräuner-Osborne H (2010) Identification and electrophysiological characterization of new NR3-containing NMDA receptor modulators. *World Congress of Basic and Clinical Pharmacology* 16

136. Hansen KB, Mullasseril P, Dawit S, Kvist T, Kurtkaya NL, Kurtkaya S, Snyder JP, Bräuner-Osborne H, **Traynelis SF** (2010) Novel NMDA receptor antagonists identified using a cell-based screening assay for allosteric modulators of NR2D-containing NMDA receptors. *Winter Conference on Brain Research* 43

137. Hansen KB, Burger P, Vance KM, Snyder JP, Clausen RP, **Traynelis SF** (2010) Structural basis for subunit-specific activation of NMDA receptors. *Winter Conference on Brain Research* 43

138. Hansen KB, Burger P, Vance KM, Snyder JP, Clausen RP, **Traynelis SF** (2010) Subunit-specific activation of NMDA receptors. *Biophysical Society annual meeting.*

139. Jenkins MA, Kristensen AS, **Traynelis SF** (2010). The GluA1 C-terminus and stargazin influence the effects of CamKII-mediated phosphorylation on AMPA-R conductance. *Biophysical Society annual meeting.*

140. Ogden KK, Vance KM, Hansen KB, Mullasseril P, Yuan H, **Traynelis SF** (2010) Mechanistic and single channel studies of CIQ a novel allosteric modulator of GluN2C and GluN2D-containing receptors. *Soc for Neurosci Abstr 36.*

141. Yuan H, Vance KM, Sotty F, Fog K, Smith Y, **Traynelis SF** (2010) NMDA receptor expression in the subthalamic nucleus. *Soc for Neurosci Abstr 36.*

142. Hansen KB, Ogden KK, Vance KM, Mullasseril P, Yuan H, **Traynelis SF** (2010) Structural basis for potentiation by a novel subunit-selective modulator of GluN2C- and Glun2D-containing NMDA receptors. *Soc for Neurosci Abstr 36.*

143. Vance KM, Simorowski N, Furukawa H, **Traynelis SF** (2010) Ligand-specific deactivation time course of GluN1/GluN2D NMDA receptors. *Soc for Neurosci Abstr 36.*

144. Gyoneva S, **Traynelis SF** (2010) Relative contribution of different purinergic receptors in regulating microglial process motility. *Soc for Neurosci Abstr 36.*

145. Jenkins MA, Kristensen AS, Makino Y, Johnson RC, Huganir R, **Traynelis SF** (2010) CaMKII enhances conductance of neuronal AMPA receptors via phosphoryation of GluA1 Ser831. *Soc for Neurosci Abstr 36.*

146. Acker TM, Mosley CA, Hansen KB, Mullasseril P, Andersen KT, Vellano KM, Brauner-Osborne H, Liotta DC, **Traynelis SF** (2010) Efforts toward NMDA GluN2C/D subunit selective antagonists. *32nd National Medicinal Chemistry Symposium.*

147. Santangelo RM, Vance KM, Ogden KK, Yuan H, Hansen KB, Mullasseril P, Kurtkaya NL, Orr AG, Le P, Vellano KM, **Traynelis SF**, Liotta DC (2010) Synthesis and SAR of a novel class of tetrahydroisoquinoline-based potentiators of NR2C/D-containing NMDA receptors. *32nd National Medicinal Chemistry Symposium.*

148. Ogden KK, Khatri A, **Traynelis SF** (2011) Molecular determinants of NMDA receptor allosteric potentiation *Soc for Neurosci Abstr 37.*

149. Gyoneva S, **Traynelis SF** (2011) Motility of resting and activated microglia in response to injury in acute brain slices *Soc for Neurosci Abstr 37.*

150. Vance KM, Hansen K, **Traynelis SF** (2011) GluN1 splice variant control of GluN1/GluN2D NMDA receptors *Soc for Neurosci Abstr 37.*

151. Jenkins MA, **Traynelis SF** (2011) The membrane proximal region of the GluA1 subunit acts as a hyper-regulatory domain of AMPA receptor conductance *Soc for Neurosci Abstr 37.*

152. Hansen KB, Ogden KK, Risgaard R, Clausen RP, **Traynelis SF** (2011) Structural determinants for subunit-selective activation of NMDA receptors *Soc for Neurosci Abstr 37.*

153. Acker TM, Yuan H, Hansen KB, Vance KM, Ogden KK, Burger PB, Snyder JP, Liotta DC, **Traynelis SF** (2011) Subunit-selective GluN2C/D NMDA receptor modulators: Structure Activity Relationship and Mechanism *Soc for Neurosci Abstr 37.*

154. Hansen KB, Traynelis SF (2011) Modulation of NMDA receptor function by subunit-selective ligands. *ISN Satellite Symposium*

155. Hansen KB, **Traynelis** (2012) Structural determinants and mechanism for inhibition of NMDA receptors by a new class of non-competitive antagonists. *Winter Conference on Brain Research* 45

156. Jenkins, M, **Traynelis SF** (2012) PKC phosphorylates GluA1 to increase AMPA receptor conductance. *Winter Conference on Brain Research* 45

157. Ogden K, **Traynelis SF** (2012) Molecular determinants of NMDA receptor allosteric potentiation *Winter Conference on Brain Research* 45

158. Zimmerman SS, Khatri A, Zhang J, Le P, **Traynelis SF**, Liotta DC (2012) Design, Synthesis and Structure-Activity-Relationship of a Novel Series of GluN2C Selective Potentiators. *American Chemical Society*

159. Dravid SM, Mannaioni G, Lee J, Wahl P, Lee CJ, **Traynelis SF** (2012) Protease activated receptor-1 (PAR1) control of glutamate time course in the synapse cleft. *Experimental Biology*.

160. Khatri A, Zimmerman SS, Yuan H, Liotta DC, **Traynelis SF** (2012) Mechanism of action for a Novel GluN2C NMDA receptor potentiator. *Soc for Neurosci Abstr 38.*

161. Ogden KK, **Traynelis SF**, Heldt SA (2012) Potentiation of GluN2C/D-containing NMDA receptors enhances emotional learning *Soc for Neurosci Abstr 38.*

162. Gyoneva S, Davalos D, Akassoglou K, **Traynelis SF** (2012) Microglial motility under pro-inflammatory conditions in vivo. *Soc for Neurosci Abstr 38.*

163. **Traynelis SF**, Gyoneva S, Murphy TJ (2012) Norepinephrine modulates microglial motility through α2A and β2 receptors in activation status-dependent manner. *Soc for Neurosci Abstr 38.*

164. Fernández-Cuervo G, Ogden KK, Le P, Garnier-Amblard EC, **Traynelis SF** (2012). Structure-activity relationship studies of 2-benzamido thiophene analogues as novel negative or positive subunit-selective allosteric modulators of NMDA receptors.

165. Katzman BM, Perszyk RE, Liotta DC, **Traynelis SF** (2013) A novel class of negative allosteric modulators of NMDA receptor function. *Soc for Neurosci Abstr 39.*

166. Strong KL, Ogden KK, Freel RMS, Liotta DC, Chastain LG, Kinkead B, **Traynelis SF** (2013) Subunit-selective GluN2C and GluN2D NMDA receptor potentiators reverse MK801-induced impairment of pre-pulse inhibition. *Soc for Neurosci Abstr 39.*

167. Ogden KK, Zhang J, **Traynelis SF** (2013) The pre-M1 region of GluN2 subunits is a critical gating element of NMDA receptors. *Soc for Neurosci Abstr 39.*

168. Gyoneva S, Shapiro L, Lazo C, Miller G, **Traynelis SF** (2013) Microglia in acute brain slices from MPTP-treated mice have an impaired response to tissue damage. *Soc for Neurosci Abstr 39.*

169. Traynelis SF, Yuan H, Wells G, Myers S, Nicholson KL, Snyder JP (2013) Context dependent neuroprotection *Winter Conference on Brain Research* 46

170. **Traynelis SF**, Yuan H, Wells G, Myers S, Nicholson KL, Snyder JP (2013) Context-dependent NMDA receptor antagonism. *23rd Neuropharmacology Conference* Official Satellite of the 2013 Meeting of the Society for Neuroscience .

171. Yuan H, Pierson TM, Boerkoel CF, Gahl WA, **Traynelis SF** (2013) Functional changes of a d*e novo GRIN2A* mutation in a patient with refractory seizures and early-onset epileptic encephalopathy. Annual Meeting of the American Epilepsy Society.

172. Butler A, Kallos J, LaPlaca M, Ressler K, **Traynelis SF**, Wolf S (2013) Randomized placebo-controlled, double-blind pilot study of D-cycloserine in chronic stroke. Control ID: 1726105 *Combined Sections Meeting, American Physical Therapy Association*, Las Vegas, NV.

173. Traynelis SF, Yuan H (2014) NMDA receptor gating and human disease. *Benzon Symposium N0. 59, Membrane proteins: structure, function, and dynamics.*

174. Hansen KB, Ogden KK, **Traynelis SF** (2014) Pharmacological and functional properties of triheteromeric GluN1/GluN2A/GluN2B NMDA receptors. *Winter Conference on Brain Research* 47.

175. Ogden KK, Yuan H, Hansen K, Zhang J, Gibb A, **Traynelis SF** (2014). A human mutation in the M4 helix of GluN2A accelerates forward gating transitions in NMDA receptors. *58th Annual BiophysicalSoc Meeting.*

176. **Traynelis SF**, Falk MJ, Yudkoff M, Li D, Tian L, Marsh ED, Ortiz-Gonzalez X, McCormick E, Lynch D, Hakonarson H, Yuan H (2014) Two NMDA receptor mutations in transmembrane domain M3 related to early-onset seizures. *Annual American Neurology Association Meeting. Abstract #350352.*

177. Yuan H, Swanger SA, Wells G, Hansen KB, Adams DR, Boerkoel CF, Toro C, Gahl WA, Synder JP, **Traynelis SF** (2014). Functional changes of a de novo GRIN2B missense mutation in a patient with developmental delay. *Annual American Neurology Association Meeting. Abstract #350148.*

178. Swanger SA, Zimmermann SS, Acker TM, Vance KM, Mosley CA, Liotta DC, **Traynelis SF** (2014). Synthesis, mechanism of action, and structural determinatns for a novel class of GluN2C/D-selective NMDA receptor antagonists. *Soc for Neurosci Abstr 40.*

179. Perszyk R, **Traynelis SF** (2014) Mechanism of action of a novel series of drug-like N-methyl-D-aspartate receptor positive allosteric modulators and their effects in hippocampal CA1 neurons *Soc Neurosci Abstr 40.*

180. Liu S, Sanz-Clemente A, Yuan H, **Traynelis SF**, Roche K (2014) Characterization of NMDARs containing mutations implicated in human diseases *Soc for Neurosci Abstr 40*

181. Traynelis SF, Ogden KK, Chen Wenjuan, Tankovic A, Aizenman E, Hansen KB, Yuan H (2015) The human GluN2A mutation P552R enhances NMDA receptor function and promotes neurotoxicity *Soc Neurosci Abstr 41*

182. Strong KL, Menaldino DS, Ogden KK, **Traynelis SF**, Liotta DC (2015) The structure activity relationship of tetrahydroisoquinoline N-methyl-D-aspartate receptor positive allosteric modulators can be modified to target GluN2B-containing receptors. *American Chemical Society Meeting, Denver 2015.*

183. **Traynelis SF**, Perszyk R, Gangireddy PK, MottD , Swanger S, Fernandez-Cuervo G, Garnier-Amblard E, Liotta DC, Liebeskind L (2015) Positive allosteric modulation of synaptic GluN2B receptors in hippocampus. *Winter Conference on Brain Research* 48.

184. **Traynelis SF** (2015) Novel subunit-selective positive allosteric modulators (PAMs) of GluN1/GluN2C NMDA receptors. *Winter Conference on Brain Research* 48.

185. Perszyk RE, DiRaddo JO, Strong KL, Low C-M, Pelkey KA, TankovicA , McBain CJ, Liotta DC, **Traynelis SF** (2015) (+)-CIQ, the active enantiomer of CIQ, potentiates GluN2D-containing NMDA receptors in hippocampal interneurons. *Gordon Research Conference, Excitatory synapses and brain function.*

186. Chen W, Tankovic A, **Traynelis SF**, Yuan H (2015) Functional evaluation of a de novo GRIN2A mutation identified in a patient with severe global development delay and intractable epilepsy. *American Epilepsy Society Annual Meeting*.

187. Yuan H, Chen W, Tankovic A, Kosobucki GJ, Schullen AJ, Aizenman E, **Traynelis SF** (2015) Functional analyses of a human GRIN2A pre-M1 mutation associated with epilepsy: from molecular mechanis to rescue pharmacology. *American Epilepsy Society Annual Meeting*.

188. Platzer K, Yuan H, **Traynelis SF**, GRIN2B study group, Lemke JR (2016) Novel phenotypic- and functional aspects of heterozygous de novo mutations in GRIN2B. *ECE Meeting.*

189. McDaniel MJ, Ogden KK, Chen W, Swanger SA, Hu C, Tankovic A, Kusumoto H, Kosobucki GJ, Schulien AJ, Su Z, Pecha J, Bhattacharya S, Aizenman E, Yuan H, **Traynelis SF** (2016) Evaluation of NMDA receptor human mutations suggests a role for pre-M1 helix in gating. *Soc for Neurosci Abstr 42.*

190. Bhattacharya S, Swanger SA, Chen W, Strong KL, Burger P, Wells G, Tankovic A, Hu C, Kusumoto H, Hansen KB, Millichamp JJ, **Traynelis SF**, Yuan H (2016) Mechanistic insights into agonist binding domain mutations in NMDA receptors underlying neurodevelopmental disorders. *Soc for Neurosci Abstr 42.*

191. Yuan H, Kosobucki GJ, Chen W, Schulien AJ, Tankovic A, Hu C, Kusumoto H, Li D, Marsh ED, Falk MJ, Aizeman E, **Traynelis SF** (2016) A *GRIN2D* Mutation in Transmembrane Domain M3 Associated with Severe Epileptic Encephalopathy. *American Epilepsy Society Annual Meeting*.

192. Kannan V, Hu C, Kusumoto H, **Traynelis SF**, Yuan H (2016) Molecular Mechanism of a *GRIN2A* M2 Mutation Associated with Early-onset Epileptic Encephalopathy and Potential Rescue Pharmacology. *American Epilepsy Society Annual Meeting*.

193. Lemke JR, Platzer K, Yuan H, Chen W, Hu C, Kusomoto H, Schütz H, Laube B, Heyne HO, Helbig KL, DiDonato N, Dobyns WB, **Traynelis SF** (2016) *GRIN2B* encephalopathy – novel phenotypic, genetic and functional aspects. *American Society for Human Genetics Meeting*, Abstract Control Number: 1601201745

194. Traynelis SF (2016) NMDA receptor function and human disease. *Annual Japanese Pharmacology Society Meeting*.

195. Strasdeit T, Haering SC, Bhattacharya S, Aslam M, von Engelhardt J, **Traynelis S**, Hollmann M (2017) Claudins: an unexpected source for more tetraspanning proteins acting as transmembrane AMPA receptor modulatory proteins. *The International Fall Meeting of the German Society for Biochemistry and Molecular Biology*.

196. Perszyk RE, Ogden KK, Strong KL, Liotta DC, **Traynelis SF** (2017) Channel open probability controls allosteric modulation of potency and efficacy. *Annual Biophysics Society Meeting*

197. Traynelis, SF (2017) Allosteric modulation of NMDA receptors. *FASEB Ion Channel Regulation SRC*

198. Bhattacharya S, Khatri A, Swanger SA, Hansen KB, Yuan H, **Traynelis SF** (2017) Triheteromeric GluN1/GluN2A/GluN2C NMDA receptors have unique pharmacological properties. *Soc Neurosci Abstr 43.*

199. Amador A, Bostick C, Boland M, Yuan H, Chen W, Myers S, **Traynelis SF**, Goldstein DB, Frankel WN (2017) Mouse models of childhood epilepsy caused by a *de novo GRIN2A* missense mutation. *Soc Neurosci Abstr 43.*

200. Yuan H, Zhang J, Tang W, Kusumoto H, Myers SJ, **Traynelis SF** (2017) De Novo NMDAR GRIN Mutations in M2 Channel Pore-Forming Domain Associated with Neurological Diseases. *ASHG*: The American Society of Human Genetics Annual Meeting, Oct. 17-21, Orlando, FL.

201. Myers SJ, Shaulsky G, Kim S, Yuan H, **Traynelis SF** (2017) Functional evaluation of rare variants in glutamate receptor GRIN, GRIA, GRIK, and GRID genes reveals a diversity of effects on receptor activity. ASHG: The American Society of Human Genetics Annual Meeting, Oct. 17-21, Orlando, FL.

202. Yuan H, Tang W, Zhang J, Kusumoto H, Myers SJ, **Traynelis SF** (2017) Functional properties of GRIN Mutations in the M2 Channel Pore-Forming Domain Associated with Epileptic Encephalopathy. AES: 71th American Epilepsy Society Annual Meeting, Dec. 01-05, Washington, DC.

203. Swanger SA, **Traynelis SF** (2017) GluN2-specific NMDA receptor regulation of synaptic transmission and excitability in the thalamus. *Soc Neurosci Abstr 43.*

204. Traynelis SF, Khatri A, Swanger SA, Bhattacharya S, Hansen KB (2017) Single channel properties of triheteromeric GluN1/GluN2A/GluN2C NMDA receptors are distinct from diheteromeric GluN1/GluN2A and GluN1/GluN2C. *Soc Neurosci Abstr 43.*

205. Perszyk RE, Strong KL, Epplin MP, Menaldino D, McDaniel MJ, Kusumoto H, Ogden KK, Bhattacharya S, Zhang J, Le P, Liotta DC, **Traynelis SF** (2017) Stereoselective actions of a positive allosteric modulator of NMDA receptors reflect unique structural determinants of action. *Soc Neurosci Abstr 43.*

206. Summer SL, Swanger SA, Acker TA, Zimmerman SS, Mosley CA, Menaldino DS, Liotta DC, **Traynelis SF** (2017) Series of GluN2C-GluN2D Selective Negative Allosteric Modulators of the NMDA-Receptor. *Southeastern Meeting of the American Chemical Society, Charlotte, NC*

207. Summer SL, Menaldino DS, Liotta DC, **Traynelis SF** (2017) Sulfonamide motif in NMDA receptor ligands. *Abstract for Meeting of the American Chemical Society* Spring 2018 – New Orleans, LA

208. **Traynelis, SF** (2017) Session: NMDA Receptors in Epilepsy: mutations, inhibitory circuits, and personalized medicine. Genetic variation of NMDA receptors and human disease. American Epilepsy Society, 71th *American Epilepsy Society Annual Meeting*, Invited Speaker, Washington DC Dec 3, 2017.

209. **Traynelis SF**, Strong KL, Epplin MP, Ogden KK, Kusumoto H, Bhattacharya S, Shaulsky G, Perszyk RE, Menaldino DS, Hansen KB, Wilding TJ, Camp CR, McDaniel MJ, Zhang J, Le P, Huettner JE, Liotta DC (2018) Novel positive allosteric modulators for NMDARs demonstrate enantiomer-specific actions. *Soc Neurosci Abstr 44.*

210. Amador A, Kanber A, Ozuruonye E, Owens S, Peters J, Olson H, Poduri A, Boland M, Goldstein D, **Traynelis SF**, Yuan H, Frankel WN, Yang M (2018) Mice with heterozygous missense mutation of Grin2a exhibit developmental delay, hyper-activity, learning deficits. *Soc Neurosci Abstr 44.*

211. Camp CR, **Traynelis SF** (2018) Loss of GluN2A activity promotes hyperexcitability in the mouse hippocampus: a model to understand epileptic activity in *GRIN2A* LOF Variants. *Soc Neurosci Abstr 44.*

212. Lumsden E, Troppoli TA, Myers SJ, Zanos P, Kim S, Aracava Y, Kehr J, Wang F-H, Schmidt S, Jenne CE, Lane M, Moaddel R, Morris P, Thomas C, **Traynelis SF**, Pereira EFR, Thompson SM, Albuquerque EX, Gould TD (2018) NMDA receptor inhibition is not a major determinant of the fast-onset antidepressant effects of the ketamine metabolite (2R,6R)-hydroxynorketamine. *Soc Neurosci Abstr 44.*

213. Bhattacharya S, Yi F, Khatri A, Swanger SA, Yuan H, Hansen KB, **Traynelis SF** (2018) Selective expression of triheteromeric NMDA receptors reveals unique properties. *Soc Neurosci Abstr 44.*

214. Behlmann A, Myers SJ, Kim S, Shaulsky G, Ross SM, Yuan H, da Silva C, Bean L, Ankala A, Askree S, **Traynelis SF**, Alexander J (2018) Functional Evaluation of Variants Identified Through Genetic Testing for Epilepsy: A Model using the GRIN Family Genes. *Annual Meeting of the American College of Medical Genetics and Genomics*

215. Myers SJ, Shaulsky G, Kim S, Yuan H, **Traynelis SF** (2018) Functional evaluation of rare variants in the family of glutamate receptor *GRIN* genes reveal a diversity of effects on receptor activity. *Annual Meeting of the American Society of Human Genetics*, Oct 2017.

216. Summer SL, Menaldino DS, **Traynelis SF**, Liotta DC (2018) The sulfonamide motif in NMDA receptor ligands. *ACS National meeting.*

217. Epplin M, Strong KL, Bacsa J, Butch CJ, Burger PB, Menaldino DS, Traynelis SF, Liotta DC (2018) Structure−activity relationship of a tetrahydroisoquinoline class of N–methyl–D–aspartate receptor modulators that potentiates GluN2B–containing N–methyl–D–aspartate receptors. *ACS National meeting.*

218. Li J, Tang W, Zhang J, Kannan V, Yuan H, **Traynelis SF** (2018) Evaluation of FDA-approved NMDAR-targeted medications on epilepsy-associated *GRIN* mutations located in M2 transmembrane domain. *American Epilepsy Society Annual Meeting.*

219. Tang W, **Traynelis SF**, Yuan H (2018) Rescue Pharmacology of loss-of-Function *GRIN* mutations associated with epileptic encephalopathy. *American Epilepsy Society Annual Meeting.*

220. Yuan H, XiangWei W, Kannan V, Jiang Y, **Traynelis SF** (2018) Functional evaluation of a *GRIN2D* missense mutation associated with epileptic encephalopathy. *American Epilepsy Society Annual Meeting.*

221. Zhu Z, Bozarth X, Zhang J, Tang W, Myers S, Dobyns W, **Traynelis SF**, Yuan H (2018) A loss-of-function de novo *GRIN1* variant associated with myoclonus and severe intellectual disability. *American Epilepsy Society Annual Meeting.*

222. XiangWeiW, Yuan H, Myers S, **Traynelis SF**, Jiang Y (2018) *GRIA* Variations associated with epilepsy and intellectual disabilities. *American Epilepsy Society Annual Meeting.*

Patents (awarded or pending)

2008 **US Patent 7,375,136** "pH-dependent NMDA receptor antagonists" Traynelis SF, Liotta DC, Snyder JP,Altas Y, Mott D, Doherty JJ, Dingledine RJ.

2013 **US Patent 8,420,680** "NMDA receptor antagonists for neuroprotection" Liotta DC, Snyder JP, Traynelis SF, Wilson L, Mosley C, Dingledine RJ, , Tahirovic Y, Myers SJ

2014 **US Patent 8,822,462** "Subunit selective NMDA receptor potentiators for the treatment of neurological conditions" Traynelis SF, Liotta DC, Santagelo RM, Garnier EC,

2015 **US Patent 9,079,852B2** "NMDA receptor antagonists for neuroprotection" Liotta DC, Snyder JP, Traynelis SF, Wilson L, Mosley C, Dingledine RJ, , Tahirovic Y, Myers SJ

2017 **US Patent 9,737,522** "NMDA receptor modulators and uses related thereto" Traynelis SF, Praseeda Mullasseril, Ethel Garnier, Dennis C Liotta, Sommer Zimmerman

2014 "Pyrazoline dihidroquinolones, pharmaceutical compositions, and uses" (2014) Acker T, Liotta DC, Traynelis SF, Jing, Y. PCT WO 2014/210456A1

2016 "N-methyl-D-aspartate Receptor (NMDAR) Potentiators, Pharmaceutical Compositions, And Uses Related Thereto" Katie LStrong, David Menaldino, Dennis C Liotta, Stephen F Traynelis, Rose M Freel, PCT/US2016/022430

2017 "Thieno[2,3-D]pyrimidin-4-one Derivatives as NMDAR Modulators and Uses Related Thereto" (2017) Traynelis SF, Liebeskind LS, Liotta DC, Garnier-Amblard, EC, Gangireddy, PR Serial No. 15/528,087

Software Development:

Modified Diffusional Analysis Software (1988), supplied to 2 laboratories
Synaptic Analysis Software "M / O / SE / SPEV" (1991-1995), supplied to 5 labs
Synaptic / Single Channel Modeling -Analysis Software "NPM" (1996-present), supplied to 56 labs
Ion Permeation Modeling Software (1996-present). Available by FTP on web (>50 downloads)
ChanneLab Ion Channel Kinetic Modeling Software (1996-present). Available from Synaptosoft, Inc.
ChanneLab Ion Channel Teaching Workbook (2004). Available upon request from Emory University.
Oocyte Recording and Analysis Software (2017), Available upon request from Emory University.

Seminars and Lectures

1. University College London, London, UK. Host: Drs. Cull-Candy/Colquhoun 1988.
2. NIH, Bethesda, MD. Host: Dr. Mark Mayer 1990.
3. Duke University, Durham, NC. Host: Epilepsy Program Project 1990.
4. Max Planck Institut, Heidelberg, Germ. Host: Dr. Bert Sakmann, 1990.
5. University College London, London, UK. Host: Department of Pharmacology 1991.
6. Duke University, Durham, NC. Host: Epilepsy Program Project 1991.
7. Salk Institute, La Jolla, CA.. Host: Molecular Neurobiology Laboratory 1992.

8. University of California, San Francisco. Host: Dr. Roger Nicoll, 1992.
9. Duke University, Durham, NC. Host: Department of Neurobiology 1993.
10. University of North Carolina, Chapel Hill, NC. Host: Department of Pharmacology 1993.
11. Emory University, Atlanta, GA. Host: Department of Pharmacology 1993.
12. Iowa University, Iowa City, IA. Host: Department of Pharmacology 1994.
13. Emory University, Atlanta, GA. Host: Neuroscience Program 1994.
14. Novo Nordisk, Copenhagen, DK. Host: Department of Molecular Neurobiology 1994.
15. SFB Kolloquium, Goettingen, DE. Host: Dr. Michael Hollmann 1995.
16. Ciba-Geigy, Basel, SW. Host: Dr. Bernhard Bettler 1995.
17. SIBIA, Inc. La Jolla, CA. Host: Dr. Gonul Velicelebi. 1995.
18. Rush University, Chicago IL. Host Dr. Tom DeCoursey. 1995.
19. NIH. Bethesda, MD. Host: Dr. Chris McBain. 1996.
20. NIAAA-NIH. Bethesda, MD. Host: Dr. Li Zhang. 1996.
21. New York University, NY. Host: Margaret Rice. 1996.
22. University of Minnesota Neuroscience Program. Host: Summer Research Program. Aug, 1997.
23. University of Pittsburgh, Pittsburgh, PA. Host: Department fo Neurobiology. Oct. 1997.
24. Cornell University, Ithaca NY. Host: Department of Pharmacology. Nov 1997.
25. Yale University, New Haven, CT. Host: Department of Pharmacology. April. 1998.
26. Aarhus University, Dept Molecular Neurobiology. August, 1999.
27. Agora For Biosystems, Sigtuna Sweden. Aug, 1999
28. L'Ecole Normale Superieure, Paris France Host: Dr. Jacques Neyton. May, 2000
29. CNRS Caen, France: Host Dr. Denis Vivien. June, 2000
30. CNRS Montpelier, France. Host: Dr. Jean-Phillipe Pin. June 2000.
31. SUNY Buffalo, NY, Dept Biophysics. Host: Dr. Anthony Auerbach. Dec 2000.
32. University of Florida, Department of Pharmacology. Host Dr. Roger Papke. Oct. 2001
33. Society for Neuroscience Satellite Symposium. Study of ion channel kinetics using Channelab. Nov, 2001.
34. NIAAA-NIH. Bethesda, MD. Host: Dr. Li Zhang. 2002.
35. University of Michigan, Neurosurgery. Host: Richard Keep. Mar, 2002.
36. SUNY Stonybrook. Host Stella Tsirka. April, 2002.
37. Univ Edinburgh, Scotland. Host: David Wyllie May 2, 2002
38. Neuropharmacology IDG Symposium, Edinburgh Scotland May 3, 2002.
39. Einstein University, New York. Host Dr. Suzanne Zukin.Oct 9, 2002.
40. Society for Neuroscience Satellite Symposium. Study of ion channel kinetics using Channelab. Nov, 2002.
41. Vanderbilt University, Dept Pharmacology. Host Heidi Hamm/Alex Brown. April 8, 2003.
42. Neuroscience Institute, Singapore, Invited Speaker Mar, 2003 (declined)
43. International Conference GBM Study Group Neurochemistry, Invited speaker, Sept 19-20, 2003 (declined).
44. University of Iowa, Dept Pharmacology. Host Johannes Hell, Sept 9, 2003.
45. Georgia Institute of Technology, School of Biology, Host: Nael McCarty, Sept 19, 2003
46. Society for Neuroscience Satellite Symposium. Fitting of macroscopic currents. Nov 7, 2003.
47. Dept Neurosurgery, Grand Rounds, Emory University School of Medicine, Jonathon Hall, Feb 2004
48. University of North Carolina. Host: JoAnn Trejo, Dept Pharmacology, June 1, 2004
49. Georgia Life Science Summit. Host Gary Brennaman, Georgia State University, July 29, 2004
50. Univ Minnesota, Dept Neuroscience, Lilian Yuan, Sept 24, 2004
51. Vanderbilt University, Dept Neurobiology, Sept 29, 2004
52. Annual Congress of Neurosurgical Surgeons Meeting, San Francisco, Platform speaker, Oct 2004
53. University Connecticut, Dept Physiology and Neurobiology. Nov 10, 2004
54. Emory University, Stroke Center, Nov 23, 2004
55. Winter Conference Brain Research, Symposium speaker and organizer, Jan 27, 2005
56. Emory University, Dept Physiology, Feb 17, 2005
57. University of Virginia, Dept Pharmacology, April 14, 2005
58. Emory University, Dept Regenerative Medicine, April 20, 2005
59. MBL Neurobiology Course, Woods Hole, June 15
60. Emory University, Frontiers in Neuroscience, Sept 22, 2005

61. SUNY Buffalo, Dept Physiology and Biophysics. Host: Zhen Yan , Oct 20, 2005
62. SUNY Stonybrook, Dept Neuroscience. Host Lonnie Wollmuth Oct 27, 2005
63. British Pharmacological Society, London, UK, Invited speaker For UCL Centennial Symposium, Dec 20, 2005
64. Invited Platform Speaker for 3rd Singapore International Neuroscience Conference 2006 (declined)
65. Winter Conference Brain Research, Symposium organizer and speaker, Jan 21, 2006
66. Georgetown University, Dept Pharmacology, Feb 8, 2006
67. University of Copenhagen, Dept Pharmacology, Mar 23, 2006
68. West Virginia University, Dept Chemistry, April 12, 2006
69. pH, CO2 and Brain Function, nORDfORSK wired/ Finnish Graduate School, Helsinki, Sept 1, 2006 (declined)
70. University of Pittsburgh, Dept Neuroscience, July 18, 2006
71. Drexel University, Dept Pharmacology, Sept 18, 2006
72. Colorado State University, Dept Neuroscience, Sept 20, 2006
73. University of Colorado Denver Health Sciences, Dept Neuroscience, Sept 21, 2006
74. South Carolina Center for Genetics, Greenwood SC, Dec 13, 2006.
75. Winter Conference Brain Research, Symposium organizer, Jan 28, 2007
76. Northwestern University, Chicago University, Dept Physiology, Mar 23, 2007
77. Astra-Zeneca, Wilmington DE, April 23, 2007
78. Invited Speaker at Structure and Function of the Synapse, University of Iowa, June 4 2007.
79. Invited Speaker at the Olberman Institute, Structure and Function of the Synapse, June 5, 2007.
80. Parkinson's Disease Therapeutics Conference. Invited Speaker, New York, Oct 18, 2007.
81. Yale University, Department of Pharmacology. Host: James Howe. Nov 15, 2007.
82. Merck Research Laboratory, West Point. Host Ian Reynolds / Jonathon Kearn Dec 5, 2007
83. Winter Conference Brain Research, Symposium Speaker/Organizer, Jan, 2008.
84. Ruhr University Bochum, Symposium entitled Ionotropic glutamate receptors" Feb 4, 2008 (declined).
85. University Alabama-Birmingham, Dept Neuroscience, Feb 22, 2008.
86. US-Japan Glial conference, Philadelphia PA Mar 17, 2008.
87. Pfizer, Groton CT Host: Dr. Frank Menniti, May 16, 2008.
88. Physiological Society, NMDA receptor symposium, Cambridge England July 14,2008
89. ACS meeting, Ligand gated ion channels, Philadelphia Aug 19, 2008.
90. Univ Pennsylvania, Philadelphia PA, Dept Physiology, Host: T. Hoshi Sept 18, 2008
91. Pharmaceutical University of Copenhagen, Denmark, Oct 22, 2008
92. Lundbeck Pharmaceuticals, Copenhagen, Denmark, Oct 23, 2008.
93. 11th International Congress on Amino Acids, peptides, and Proteins, Vienna Austria, Aug 3-7, 2009 (declined).
94. Cold Spring Harbor Laboratories, Glutamate gated ion channels, CSHL NY, June 12, 2009.
95. American Neurological Assoc, Symposium Speaker, Baltimore MD Oct 12, 2009
96. WFN World Congress on Parkinson's Disease, Symposium Speaker, Miami FL, Dec 16, 2009
97. Duke University, Dept NeuroBiology, Host Dr. Jim McNamara, Durham NC January 15, 2010
98. University of Tennessee-Memphis, Host Steve Tavalin, Memphis TN, Mar 30, 2010
99. Experimental Biology, PAR1 symposium (Chair, presenter), April 27, 2010
100. Lundbeck, Neuroscience and Discovery. Host Jan Egebjerg, Copenhagen Denmark May 27, 2010
101. Cold Spring Harbor Laboratories, Glutamate gated ion channels, CSHL NY, June 12, 2010.
102. Gordon Conference, Ion channels, Tilton NH, July 13 2010.
103. Vanderbilt University, Dept Pharmacology, Sept 7 2010.
104. Allosteric Modulator Drug Discovery Congress, San Diego CA, Nov 11-12, 2010
105. Johnson & Johnson, LAJolla CA, Host: Tim Lovenberg, June 14, 2011
106. Cold Spring Harbor Laboratories, Glutamate gated ion channels, CSHL NY, June 16, 2011.
107. Northwestern University, Host: Marco Martina, Chicago IL Sept 15, 2011.
108. Georgetown University, Host: Katherine Conant, Washington, DC Sept 27, 2011.
109. Boston University, Host David Farb. Boston, MA May 16, 2012.
110. American Chemical Society, August, 2012.
111. Annual Upstate New York Pharmacology Society, Buffalo NY May 13, 2013.
112. UNC Pharmacology Alumni Symposium, Chapel Hill NC May 16, 2013.
113. IUPS Congress, Symposium speaker, Birmingham UK, 24 July, 2013.

114. University College London, Host: Alasdair Gibb, London UK, 18 July 2013.
115. Lilly Research, Host: John Isaac, Windelsham, UK, July 19, 2013
116. Benzon Symposium, Copenhagen Denmark, August 2013.
117. Frontiers in Neuroscience, Emory University, Atlanta GA, Host: Neuroscience Program, Oct 25, 2013.
118. Department of Pharmacology, Emory University, Atlanta GA, Host: R. Dingledine, Nov 5, 2013.
119. 23rd Annual Neuropharmacology Conference, Elsevier, San Diego CA, Dec 8, 2013.
120. Notre Dame University, South Bend, Indiana Host: Francis Castellino Dec 1, 2013.
121. Vanderbilt University, Nashville TN, Host: Alex Brown, Feb 12, 2014.
122. Experimental Biology Symposium on Chemical Biology, San Diego CA. Chair Haian Fu, April 30, 2014.
123. Duke University, Durham NC. Host Jim McNamara, May 12, 2014.
124. Northwestern University, Chicago Ill, Host Geoff Swanson, May 14, 2014.
125. Northwestern University, Chicago Ill, Host Neurology, May 14, 2014.
126. Precision Medicine in Epilepsy, San Francsico CA, Invited speaker, Sept 29, 2014.
127. Department of Neuroscience, University of Texas, Austin TX, Nov 7, 2014.
128. International Chemical Biology Symposium, Invited Speaker, San Francisco, Nov 18, 2014.
129. American Epilepsy Society, Seattle WA, Invited speaker, Dec 9, 2014.
130. University Alabama-Birmingham, Birmingham AL, Mar 19, 2015.
131. EB Symposium, Invited Speaker, Boston MA Mar 29, 2015 (withdrew).
132. Emory University, Grand Rounds, Dept Neurology, Host Joash Lazarus, May 1, 2015.
133. Univ Michigan, Ann Arbor Michigan, Host Carrie Farrario, May 13, 2015.
134. Gordon Conference, Excitatory Synapses and Brain Function, Invited Speaker, June 10, 2015.
135. Biogen Idec, Invited Speaker, Host Stefka Gyoneva, Sept 3, 2015.
136. Pfizer, host Patrico O'Donnell, Groton Conn, Sept 30, 2015.
137. Banbury Conference on Epilepsy, Cold Spring Harbor, Invited Speaker, Nov 1, 2015.
138. Harvard University, Cambridge MA, Invited speaker, Host Ann Poduri, Feb 9, 2016.
139. The University of Georgia, Athens GA Host Shelley Hooks. Feb 17, 2016.
140. National University fo Singapore, Singapore. Host Dr. Chian-ming Low. Mar 5, 2016.
141. The Japanese Pharmacological Society Symposium, Invited Speaker, Tokyo, Japan, Mar 9-11, 2016
142. Korean Institute of Science and Technology, Seoul Korea. Host Dr. C. Justin Lee. Mar 15, 2016.
143. Invited ASPET Symposium Speaker at EB "The Peer-review process" April 4, 2016
144. Invited ADDC-ASPET Symposium Speaker at EB, "Drug Discovery in Academia" April 7, 2016
145. UC Denver, Keystone faculty retreat. Host: Dept Pharmacology. April 14, 2016.
146. University of Pittsburg, Pittsburgh PA. Host Dr. Jon Johnson, April 22, 2016.
147. The Physiological Society / American Physiological Society, Invited Speaker Dublin Ireland, July 29, 2016.
148. Emory Unviersity Epilepsy Focus, Atlanta GA, Host: Sooky Koh, Sept 14, 2016
149. Tufts University, Host: Chris Dulla. Boston MA Oct 19, 2016.
150. 26th Neuropharmacology Conference. Invited speaker. San Diego, CA Nov 10, 2016
151. Winter Conference Brain Research, Symposium Speaker, Jan, 2017.
152. Peking University Pediatric Neurology Forum 2017, Beijing China, April 8, 2017.
153. University of Connecticuit, Host: Anastasios Tzingounis. Storrs, Conn. April 19, 2017.
154. FASEB Ion Channel Regulation, Host: Mark Dell'Acqua. Steamboat Springs, CO July 10, 2017.
155. Glutamate receptor Retreat, Host Susumu Tomita. Yale, New Haven, Conn August 8, 2017
156. American Epilepsy Society, Invited Speaker, Washington DC Dec 3, 2017.
157. Genentech, Host: Jesse Hanson. San Francisco, CA. May 15, 2018.
158. *GRIN2B* Foundation, Invited Speaker, Atlanta GA, Sept 22, 2018.

Trainees (Total 110; Position, year, current status/program)

Chad Camp	Graduate student	2017-	Emory graduate student
Miranda McDaniels	Graduate student	2015-	Emory graduate student
Riley Perszyk	Graduate student	2011-2018	Emory /Ga Tech Post doc
Gyoneva, Stefka	Graduate student	2009-2013	Biogen
Jenkins, Meag	Graduate student	2009-2012	Freelance Scientific Writer
Ogden, Kevin	Graduate student	2008-2014	Ocean Ridge Biosciences, Palm Beach FL

Katie Vance	Graduate student	2006-2012	Res Manager, Reg Med Ctr, Baton Rouge, LA
Natalie LaVasseur	Graduate student	2006-2007	Licensed Pharmacist
Orr, Anna	Graduate student	2003-2009	Assistant Professor, Weill Cornell Med Coll.
Hamill, Cecily	Graduate student	2001-2006	Physician, Brookline MA (Opthalmology)
Erreger, Kevin	Graduate student	1999-2004	Assistant Professor, Vanderbilt
Junge, Candice	Graduate student	1998-2003	Research Scientist, Agensys
Gingrich, Melissa	Graduate student	1994-1999	High School Science Teacher
Jan Zhongjian Zhu	MD/PhD Student	2017-2019	Xi'an Jiaotong University School of Medicine
Jia Li	Visiting Grad Student	2017-2019	Jilin University First Hospital
Wenshu Xianghuai	Visiting Grad Student	2017-2019	Peking Univ First Hospital, Beijing, China
Mette H. Poulsen	Visiting Grad Student	2012	Post doc, University of Copenhagen
Maiken Hedergaard	Visiting Grad Student	2010	Senior Business Coordinator at Novo Nordisk
Trine Kvist	Visiting Grad Student	2009	Post doc, University of Copenhagen
Karen Anderson	Visiting Grad Student	2008	Analytical Chemist at ALK Abelló
Kristensen, Anders	Visiting Grad Student	2003	Assoc Prof Dept Pharmacol Univ Copenhagen
Holm, Mai	Visiting Grad Student	2000	Assoc Prof, Dept Biomedicine, Aarhus Univ
Banke, Tue	Visiting Grad Student	1999	Assist Prof, Aarhus Univ, Denmark
Smith, Sabrina	Visiting Grad Student	1995	Dept Pediatrics-Kaiser, Div Neurology-Penn
Varun Kannen	Visiting Med Student	2017	Emory Medical Student
Wendy Chen	Visiting Med Student	2015-2016	Dept Neurology, Xiangya Hospital, China
Adam Hamilton	Rotation Student	2018	Emory Neuroscience program
Fu Hung Shiu	Rotation Student	2017	Emory Neuroscience program
Trisha Lala	Rotation Student	2017	Emory Neuroscience program
Danielle Cicka	Rotation Student	2017	Emory MD/PhD program
Dan Li	Rotation Student	2017	Emory MD/PhD program
Chad Camp	Rotation Student	2016	Emory MSP program
Lindsey Shapiro	Rotation Student	2016	Emory MSP program
Miranda McDaniel	Rotation Student	2015	Emory MSP program
Lauren Shapiro	Rotation Student	2013	Emory Neuroscience program
Riley Perszyk	Rotation Student	2011	Emory MSP program
Jake Winschel	Rotation Student	2010	Emory MSP program
Stefka Gyoneva	Rotation Student	2009	Emory MSP program
Abraham Mathai	Rotation Student	2008	Emory Neuroscience program
Eric Armstrong	Rotation Student	2008	Emory MSP program
Kevin Ogden	Rotation Student	2008	Emory MSP program
Niki Sawyer	Rotation Student	2008	Emory MSP program
Chris Mackinson	Rotation Student	2008	Emory MSP program
Katie Vance	Rotation Student	2007	Emory MSP program
Natalie LeVasseur	Rotation Student	2006	Emory MSP program
Sammy Ming Hin Lee	Rotation Student	2006	Emory Neuroscience program
Kate O'Toole	Rotation Student	2006	Emory MSP program
Elyse Katz	Rotation Student	2004	Emory MSP program
Anna Goldshmidt	Rotation Student	2003	Emory Neuroscience program
Amy Kostrezawa	Rotation Student	2003	Emory MSP program
Won Chung	Rotation Student	2003	Emory Neuroscience program
Bilge Kaylon	Rotation Student	2002	Emory Neuroscience program
Juan Rong	Rotation Student	2002	Emory Neuroscience program
Cecily Hamill	Rotation Student	2001	Emory MD/PhD Neuroscience
Kevin Erreger	Rotation Student	1999	Emory Neuroscience program
Candice Junge	Rotation Student	1998	Emory MSP program
Richard Peavey	Rotation Student	1996	Emory MSP program
Melissa Gingrich	Rotation Student	1995	Emory Neuroscience program
Shane Masters	Rotation Student	1995	Emory MSP program

Thomas Macek	Rotation Student	1995	Emory MSP program
John DiRaddo	Postdoctoral Fellow	2015-2016	Real Estate Invest. Co, New York, NY
Katie Strong	Postdoctoral Fellow	2015-2016	Knowles Intellectual Prop. Strategies
Subhrajit Bhattacharya	Postdoctoral Fellow	2015-	Emory postdoctoral fellow
Sharon Swanger	Postdoctoral Fellow	2012-	Emory postdoctoral fellow
Katie Vance	Postdoctoral Fellow	2012	Res Manager, Reg Med Ctr, Baton Rouge, LA
Jenkins, Meag	Postdoctoral Fellow	2011-2013	Freelance Scientific Writer
Alpa Khatri	Postdoctoral Fellow	2010-2017	Emory Postdoctoral fellow
Praseeda Mullasseril	Postdoctoral Fellow	2007-2011	US FDA
Kasper Hansen	Postdoctoral Fellow	2006-2014	Assistant Professor, Univ Montana
Kristensen, Anders	Postdoctoral Fellow	2005-7	Assoc Prof, Dept Pharmac, Univ Copenhagen
Yuan, Hongjie	Postdoctoral Fellow	2004-2012	Assistant Prof, Emory Univ Sch Med
Dravid, Shasank	Postdoctoral Fellow	2003-7	Associate Professor, Creighton Univ Sch Med
Manniaoni, Guido	Postdoctoral Fellow	2001-2004	Assoc Prof, Dept Neurosci, Univ Florence, IT
Nicole, Oliver	Postdoctoral Fellow	2001-2003	CNRS, Bordeaux France
Lee, Justin	Postdoctoral Fellow	2000-2004	Korean Institute of Technology, Seoul Korea
Banke, Tue	Postdoctoral Fellow	2000-2003	Aarhus University, Denmark
Low, Chian-Ming	Postdoctoral Fellow	1999-2001	Assoc Prof, National University, Singapore
Burgess, Michelle	Postdoctoral Fellow	1996-1997	Environmental Health Scientist, Georgia
Wahl, Philip	Postdoctoral Fellow	1995-1996	Lecturer at Technical Education, Copenhagen
Mott, David	Postdoctoral Fellow	1994-1995	Assoc Prof, Univ South Carolina Sch Med
Weitung Tang	Visiting Scholar	2017-2018	Dept Neurology, Xiangya Hospital, China
Jin Zhang	Visiting Scholar	2017	Dept Neurology, 1st Hosp, Shanxi Med Univ.
Yepes, Manuel	Visiting Scientist	2005	Professor, Emory University
Chen, Philip	Visiting Scientist	2004	Lecturer, Royal Holloway, Univ London
Wyllie, David	Visiting Scientist	2003	Professor, University of Edinburgh
Zheng, Fang	Visiting Scientist	2001-2003	Associate Professor, Univ Arkansas Sch Med
Bowie, Derek	Visiting Scientist	1999-2001	Professor, Dept Pharmacol, McGill Univ
Zhang, Sam	Visiting Scientist	1999	Johns Hopkins, Baltimore (last known)
Kojima, Hiroshi	Visiting Scientist	1996	RIKEN, Tokyo
Powers, Jennifer	Visiting Scientist	1995-1996	Kennesaw State University
James Allen	Undergraduate	2017-	Emory University
Shloka Parvatao	Undergraduate	2017-2018	Emory University
Lisa Rui	Undergraduate	2017-2018	Emory University
Ruth Mizu ^	Undergraduate	2016-	Emory University
Michelle Bermudez	Undergraduate	2016-2017	Emory University
Karyn Ding	Undergraduate	2016-2017	Emory University
Joseph Ruiz	Undergraduate	2016	Emory University
Hannah Chen	Undergraduate	2016	Emory University
Colin Lamb	Undergaduate	2015-2017	Emory University
Peter Leistikow	Undergaduate	2015-2016	Emory University
Jordan Flowers ^	Undergaduate	2015-2016	Emory University
Chun Hu	Undergaduate	2015-2016	Emory University
Jillybeth Burgado	Undergaduate	2015	Emory University
Joseph Pecha ^	Undergaduate	2015	University fo Dallas
Kevin Sheth	Undergaduate	2015	Emory University
Parth Sheth	Undergaduate	2014-2015	Emory University
Hiro Kusumoto	Undergaduate	2014	Emory University
Anel Tankovic	Undergaduate	2013-2014	Emory University
Zhuocheng Justin Su	Undergraduate	2012-2013	VCU
Manish Karamchandani	Undergraduate	2013-2014	Emory University *Honors Thesis*

Gabi Fernandez-Cuervo ^	Undergraduate	2011	Univ Puerto Rico
Sara Dawit ^	Undergraduate	2009-2010	Clairmont College, Senior *Thesis*
Pranav Mahedevan	Undergraduate	2009	Emory University
Edward Marchan ^	Undergraduate	1999-2000	Emory University *Honors Thesis*
Chris Lalan	Undergraduate	1995	Emory University

^ *Under-represented minority*

Dissertation Committee Service (External Examiner): Total 43*

Jim Baer, Dorothy Chung, Melissa Gingrich, Dave Wolfe, Fernanda Laezza, Ellen Olson, Candice Junge, Kevin Erreger, Stan Nakanishi, Matt Fuller, Cecily Hamill, Vinayek Shanbhag, Natalie LeVaseur, Li Tin Chien, Anna Goldschmidt, Jenn Wilhelm, Meag Jenkins, Lisa Kreiner, Kelly McCoy, Katie Vance, Charity Duran, Kevin Ogden, Becky Meyers, Stephanie Ritter, Chris Mackinson, Jason Stephenson, Danny Infield, Paul Evans, Kristin Stout, Lauren DePoy, Riley Perszyk, Kyle Gerber, Michelle Giddens, Miranda McDaniels, Chad Camp, Lindsey Shapiro, Anthony Michael Downs, , Kim Nguyen, Kasper Hansen* (Univ Copenhagen), Richard Clark* (Univ Pittsburgh), Annabel Romero Hernandez* (Cold Spring Harbor), Nathan Glasgow* (Univ Pittsburgh), Maja Jessen* (Univ Copenhagen)

Teaching and Teaching-related University Service

1994-1999	Local Area Network Coordinator for Department of Pharmacology
1994-2017	Contributor/Grader for Written Qualifying PhD exam (MSP and/or Neuroscience)
1994-1997	Lecturer in IBS 717 "Neuropharmacology"
1994-2006	Lecturer in IBS 750 "Molecular Neurobiology"
1994-present	Lecturer in IBS 531 "Principles and Approaches to Pharmacology"
1996-2007	Lecturer in IBS 532 "Allied Health Pharmacology (Physicians Assistants)"
1996-present	Lecturer in BAHS 504 "Introduction to Pharmaoclogy for Anesthesiology Assistants"
1997-present	Lecturer in IBS 716 "Medical Pharmacology"
1997-2012	Lecturer in IBS 701 "Cell Surface Receptors"
1997-2014	Lecturer in IBS 704 "Ion Channels"
1998-2002	Lecturer in IBS 534 Computational Neuroscience
1998-2001	Lecturer IBS 520 Advance Topics in Biochemistry
2001	Lecturer in BMED 8120 "Physiologic Systems I"
2002	Lecturer, IBS502 "Molecular, Cellular, and Developmental Neuroscience"
2003	Lecturer, IBS511 "Introduction to Molecular Biology and Biochemistry"

Course Director

1995	Co-director IBS 570R "Neurobiology Seminar Series"
1995	Director IBS 791R "Pharmacology Colloquiem"; Organized Fall Seminar Series
1996	Director IBS 791R "Pharmacology Colloquiem"
1996	Co-director IBS 570R "Pharmacology/Physiology Seminar Series"
2002	Director IBS701 "Cell Surface Receptors"
2002	Co-Director IBS502 "Molecular, Cellular, and Developmental Neuroscience"
2003	Co-Director IBS511 "Introduction to Molecular Biology and Biochemistry"
2004	Director, IBS701 "Cell Surface Receptors"
2004	Co-Director and Lecturer, IBS511 "Introduction to Molecular Biology and Biochemistry"
2007	Director IBS701 "Cell Surface Receptors"
2009	Director IBS701 "Cell Surface Receptors"
2009	Co-Director, IBS570 "MSP Student Seminars"
2010	Co-Director, IBS570 "MSP Student Seminars"
2011	Co-Director, IBS570 "MSP Student Seminars"

Year-by-Year breakdown of committee service, mentoring, and other activities

1994 Supervisor MTT Student Sponsored Seminar Series
1996 Membership Committee, Neuroscience Program

1996 PPS Qualifying Exam Committee
1996 Guest Reviewer for PPS Oral Exam (Thomas Macek)
1996 Dissertation Committees (Jim Baer, Dorothy Chung, Melissa Gingrich)
1997 Membership Committee, Neuroscience Program
1997 Admissions Committee, Neuroscience Program
1997 PPS Qualifying Exam Committee
1997 Guest Reviewer for Neuroscience Oral Exam (Fernanda Laezza)
1997 Dissertation Committees (Jim Baer, Dorothy Chung, Melissa Gingrich)
1998 Membership Committee, Neuroscience Program
1998 Admissions Committee, Neuroscience Program
1998 Executive Committee, Neuroscience Program
1998 Dissertation Committees (Dave Wolfe, Ellen Olson, Melissa Gingrich)
1999 Membership Committee, Neuroscience Program
1999 Executive Committee, Neuroscience Program
1999 Guest Reviewer for Neuroscience Oral Exam (Fernanda Laezza)
1999 Dissertation Committees (Dave Wolfe, Ellen Olson, Melissa Gingrich, Fernanda Laezza)
2000 Membership Committee, Neuroscience Program
2000 Executive Committee, Neuroscience Program
2000 Oral Qualifying Exam Committee, Neuroscience Program
2000 Conflict of Interest Committee, Emory School of Medicine
2000 Dissertation Committees (Dave Wolfe, Ellen Olson, Candice Junge, Kevin Erreger, Fernanda Laezza)
2001 Membership Committee, Neuroscience Program
2001 Executive Committee, Neuroscience Program
2001 Oral Exam Committee, Neuroscience Program
2001 Conflict of Interest Committee, Emory School of Medicine
2001 Dissertation Committees (Dave Wolfe, Ellen Olson, Candice Junge, Kevin Erreger, Stan Nakanishi, F.Laezza)
2002 Membership Committee, Neuroscience Program, Chairman
2002 Executive Committee, Neuroscience Program
2002 Oral Exam Committee, Chairman, Neuroscience Program
2002 Conflict of Interest Committee, Emory School of Medicine
2002 Dissertation Committees (Ellen Olson, Candice Junge, Kevin Erreger, Stan Nakanishi, Matt Fuller)
2003 Executive Committee, Neuroscience Program
2003 Conflict of Interest Committee, Emory School of Medicine
2003 Dissertation Committees (Ellen Olson, Candice Junge, Kevin Erreger, Stan Nakanishi, Vinayek Shanbhag, Lisa Kreiner, Matt Fuller)
2004 Executive Committee, Neuroscience Program
2004 Conflict of Interest Committee, Emory School of Medicine
2004 Grant writing workshop for postdoctoral fellows (Sept)
2004 Dissertation Committees (Kevin Erreger, Stan Nakanishi, Vinayek, Shanbhag, Lisa Kreiner, Matt Fuller, Cecily Hamill, Anna Goldschmidt, Jenn Wilhelm)
2005 Oral Exam, Outside Examiner, Neuroscience Program
2005 Advisory Committee to the Microchemical Facility
2005 Dissertation Committees (Stan Nakanishi, Vinayek Shanbhag, Lisa Kreiner, Matt Fuller, Cecily Hamill, Anna Goldschmidt, Jenn Wilhelm)
2006 Outside Examiner for Richard Clark, PhD thesis, University of Pittsburgh
2006 Outside Examiner for Kasper Bø Hansen, Unviersity of Copenhagen
2006 Dissertation Committees (Vinayek Shanbhag, Lisa Kreiner, Matt Fuller, Cecily Hamill, Anna Goldschmidt, Jenn Wilhelm, Meag Jenkins)
2007 Speaker, Stroke Conference for Clinical Neurology fellows and residents
2007 Dissertation Committees (Vinayek Shanbhag, Lisa Kreiner, Matt Fuller, Cecily Hamill, Kelly McCoy Li Tin Chien, Anna Goldschmidt, Jenn Wilhelm)
2008 Dissertation Committees (Vinayek Shanbhag, Lisa Kreiner, Kelly McCoy, Katie Vance, Natalie LeVaseur Li Tin Chien, Anna Goldschmidt, Jenn Wilhelm, Meag

Jenkins, Stephanie Ritter)
2009 Executive Committee, Neuroscience Program
2009 Co-organizer of the Emory Stroke-Brain Injury working group
2009 Dissertation Committees (Lisa Kreiner, Kelly McCoy, Katie Vance, Meag Jenkins, Stephanie Ritter, Charity Duran, Kevin Ogden)
2010 Executive Committee, Neuroscience Program
2010 Co-organizer of the Emory Stroke-Brain Injury working group
2010 Co-chair Planning Committee for Spring Symposium "Acute CNS Injury"
2010 Dissertation Committees (Kelly McCoy, Katie Vance, Meag Jenkins, Stephanie Ritter, Charity Duran, Kevin Ogden, Jason Stephenson)
2011 Executive Committee, Neuroscience Program
2011 Dissertation Committees (Katie Vance, Meag Jenkins, Stephanie Ritter, Chris Mackinson, Charity Duran, Kevin Ogden, Jason Stephenson)
2012 Dissertation Committees (Katie Vance, Stephanie Ritter, Charity Duran, Danny Infield, Chris Mackinson, Becky Meyers, Michelle Giddens, Danny Infield, Kevin Ogden, Jason Stephenson, Paul Evans, Kristin Stout)
2013 Dissertation Committees (Stephanie Ritter, Chris Mackinson, Danny Infield, Kevin Ogden, Jason Stephenson, Becky Meyers, Paul Evans, Kristin Stout, Riley Perszyk)
2014 Dissertation Committees (Stephanie Ritter, Chris Mackinson, Danny Infield, Jason Stephenson, Riley Perszyk Paul Evans, Kristin Stout, Lauren DePoy)
2015 Dissertation Committees (Danny Infield, Paul Evans, Kristin Stout, Lauren DePoy, Riley Perszyk, Michelle Giddens)
2016 External Dissertation Examiner for Annabel Romero Hernandez, Cold Spring Harbor Laboratory, NY
2016 Dissertation Committees (Danny Infield, Paul Evans, Kristin Stout, Lauren DePoy, Riley Perszyk, Michelle Giddens)
2017 Dissertation Committees (Riley Perszyk, Kyle Gerber, Michelle Giddens, Miranda McDaniels, Lauren Shapiro)

2018 Faculty Search Committee (Chair)
2018 Dissertation Committees (Riley Perszyk, Kyle Gerber, Michelle Giddens, Miranda McDaniels, Lauren Shapiro, Chad Camp, Anthony Michael Downs, Kim Nguyen, Maja Jessen)