SERENA MARIE DUDEK January 2020

CURRICULUM VITAE

CURRENT ADDRESS National Institute of Environmental Health Sciences
Neurobiology Laboratory
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EDUCATION

1987-1992	Brown University, Providence, Rhode Island Ph.D. Neuroscience, Research advisor: Dr. Mark F. Bear Thesis: Metabotropic Glutamate Receptors in the Cerebral Cortex and their Possible Contribution to Synaptic Plasticity.
1988	Cold Spring Harbor Laboratory Developmental Neurobiology short course
1982-1986	University of California, Irvine B.S. Biology

POSITIONS HELD

2010-present	Senior Investigator, National Institutes of Health, NIEHS
2001-2010	Investigator, National Institutes of Health, NIEHS
1998-2001	Research Fellow, National Institutes of Health, NICHD
1996-1998	IRTA Fellow, National Institutes of Health, NICHD with Dr. R. Douglas Fields
1992-1996	Postdoctoral Fellow University of Alabama at Birmingham, Alabama with Dr. Michael J. Friedlander and Dr. Gail V.W. Johnson
1987-1992	Teaching Assistant and Predoctoral Fellow Brown University, Providence, Rhode Island
1986-1987	Student Technician, Research advisor: Dr. Gary S. Lynch University of California, Irvine, California

AWARDS

2012	NIH Director's Award
2009	NIEHS Mentor of the Year Award
2009	A.E. Bennett Research (Young Investigator) Award Society of Biological Psychiatry
1999, 2000	Fellows Award for Research Excellence, NIH
1993-1995	Individual NRSA, Natl. Eye Inst.
1992-1993	NEI postdoctoral training fellowship

1992	Travel Award: Conference on the Neurobiology of Learning and Memory, Irvine, California.
1992	Sigma Xi Outstanding Research Award
1990-1992	NIMH predoctoral training fellowship
1988	Grass Foundation Fellowship for Cold Spring Harbor course

PRIMARY PUBLICATIONS

***** >500 citations, ****** >1800 citations, [#]selected by Faculty of 1000, ^Editor's Choice, Sci. Signal., ^^News&Views, Nature Neurosci, [§]authors contributed equally; [§§]co-senior authors

McCann, K.E.[§], Lustberg, D.J.[§], Shaughnessy, E.K., Carstens, K.E., Farris, S., Alexander, G.M., Zhao, M., and **Dudek, S.M.**, Novel role for mineralocorticoid receptors in control of a neuronal phenotype. Mol Psychiatry ePub Nov 19, 2019. doi.org/10.1038/s41380-019-0598-7

Farris, S., Ward, J.M., Carstens, K.E., Samadi, M., Wang, Y., and **Dudek, S.M.**, Hippocampal Subregions Express Distinct Dendritic Transcriptomes that Reveal Differences in Mitochondrial Function in CA2. Cell Reports. 29: 522-539.E6, 2019. doi.org/10.1016/j.celrep.2019.08.093

Alexander, G.M., Riddick, N.V., McCann, K.E., Lustberg, D., Moy, S.S., and **Dudek, S.M.**, Modulation of CA2 neuronal activity increases behavioral responses to fear conditioning in female mice. Neurobiol. of Learning and Memory, ePub July 15, 2019. doi: 10.1016/j.nlm.2019.107044

Gerber, K.J., Dammer, E.B., Duong, D.M., Deng, Q., **Dudek, S.M.**, Seyfried, N.T., and Hepler, J.R. Specific proteomes of hippocampal regions CA2 and CA1 reveal proteins linked to the unique physiology of area CA2. J. Proteome Res. 18: 2571-2584, 2019. doi: 10.1021/acs.jproteome.9b00103

Gu B., Carstens K.E., Judson M.C., Dalton K.A., Rougié M., Clark E.P., **Dudek S.M.**, Philpot, B.D.**,** Ube3a reinstatement mitigates epileptogenesis in Angelman syndrome model mice. J. Clin. Invest. 129: 163-168, 2019. doi: 10.1172/JCI120816

Helton, T.D., Zhao, M., Farris, S., and **Dudek, S.M.** Diversity of dendritic morphology and entorhinal cortex synaptic effectiveness in mouse CA2 pyramidal neurons. Hippocampus, 29: 78-92, 2019. doi: 10.1002/hipo.23012

Tyssowski, K.M.[§], DeStefino, N.R.[§], Cho, J.-H., Dunn, C.J., Poston, R.G., Carty, C.E., Jones, R.D., Chang, S.M., Romeo, P., Wurzelmann, M.K., Ward, J.M., Andermann, M.L., Saha, R.N.[§§], **Dudek, S.M.**[§§], Gray, J.M.[§§] Different neuronal activity patterns

induce different gene expression programs. Neuron, 98: 530-546, 2018. doi: 10.1016/j.neuron.2018.04.001

Evans, P.R., Parra-Bueno, P., Smirnov, M.S., Lustberg, D.L., **Dudek, S.M.**, Hepler, J.R., and Yasuda, R. RGS14 restricts plasticity in hippocampal CA2 by limiting postsynaptic calcium signaling. eNeuro 5(3), 2018. doi: 10.1523/ENEURO.0353-17.2018

Evans, P.R., Gerber, K.J., Dammer, E.B., Duong, D.M., Goswami, D., Lustberg, D.L., Zou, J., Yang, J.J., **Dudek, S.M.**, Griffin, P.R., Seyfried, N.T., and Hepler, J.R. Interactome analysis reveals Regulator of G Protein Signaling 14 (RGS14) is a novel calcium/calmodulin (Ca^{2+}/CaM) and CaM Kinase II (CaMKII) binding partner. J. Proteome Res. 17: 1700-1722, 2018. doi: 10.1021/acs.jproteome.8b00027

Alexander, G.M., Brown, L.Y., Farris, S., Lustberg, D., Pantazis, C., Gloss, B., Plummer, N.W., Jensen, P., and **Dudek, S.M.** CA2 neuronal activity controls hippocampal low gamma and ripple oscillations. eLife, Nov 2; 7, pii: e38052. 2018. doi: 10.7554/eLife.38052

Gu, Z., Alexander, G.M., **Dudek, S.M.**, and Yakel, J.L. Hippocampus and entorhinal cortex recruit cholinergic and NMDA receptors separately to generate hippocampal theta oscillations. Cell Rep. 21: 3585-3595, 2017. doi: 10.1016/j.celrep.2017.11.080

Dunn, C.J., Sarkar, P., Bailey, E., Farris, S., Zhao, M., Ward, J.M., **Dudek, S.M.,** and Saha, R.N. Histone 2A.Z hypervariants, H2A.Z.1 and H2A.Z.2, play independent and context-specific roles in neuronal activity-induced transcription of Arc/Arg3.1 and other immediate early genes. eNeuro 4:4, 2017. doi: 10.1523/ENEURO.0040-17.2017

Farris, S., Wang, Y., Ward, J.M., and **Dudek, S.M.** Optimized method for robust transcriptome profiling of minute tissues using laser capture microdissection and low-input RNA-Seq. Front. Mol. Neurosci. 10: 185, 2017. doi: 10.3389/fnmol.2017.00185

Marron Fernandez de Velasco, E., Zhang, L., Vo, B.N., Tipps, M., Farris, S., Xia, X., Anderson, A., Carlblom, N., Weaver, C.D., **Dudek, S.M.,** and Wickman, K., GIRK2 splice variants and neuronal G protein-gated K+ channels: implications for channel function and behavior. Sci. Rep. v.7 (1): 1639, 2017. doi: 10.1038/s41598-017-01820-2

Henson, M.A., Tucker, C.J., Zhao, M., and **Dudek, S.M.**, Long-term depression-associated signaling is required for an *in vitro* model of NMDA receptor-dependent synapse pruning. Neurobiol. Learn. Mem. 16: 30282-30289, 2016 doi: 10.1016/j.nlm.2016.10.013

[#]Carstens, K.E., Phillips, M.L., Pozzo-Miller, L., Weinberg, R.J., and **Dudek, S.M**. Perineuronal Nets suppress plasticity of excitatory synapses on CA2 pyramidal neurons. J. Neurosci. 36: 6312-6320, 2016. doi: 10.1523/JNEUROSCI.0245-16.2016

Sciolino, N., Plummer, N., Chen, Y.-W., Alexander, G.M., Robertson, S.D., **Dudek, S.M.**, McElligott, Z.A., and Jenson, P. Recombinase-dependent mouse lines for chemogenetic activation of genetically defined cell types. Cell Reports, 15: 2563-2573, 2016. doi: 10.1016/j.celrep.2016.05.034

Alexander, G.M.[§], Farris, S.[§], Pirone, J.R., Zheng, C., Colgin, L.L., and **Dudek, S.M**., Social and novel contexts modify hippocampal CA2 representations of space. Nature Commun., 7: 10300, 2016. doi: 10.1038/ncomms10300

Pagani, J.H.[§], Zhao, M.[§], Cui, Z.[§], Williams Avram, S.K., Caruana, D.A., **Dudek, S.M.[§§],** and Young, W.S.[§§] Role of the Vasopressin 1b Receptor in rodent aggressive behavior and synaptic plasticity in hippocampal area CA2. Molecular Psychiatry. 20: 490-499, 2015. e-pub ahead of print, May 27, 2014.

^^Simons, S.B., Caruana, D., Zhao, M., and **Dudek, S.M.** Caffeine-induced synaptic potentiation in hippocampal CA2 neurons. Nature Neurosci. 15: 23-25, 2012.

[#]Saha, R.N., Wissink, E.M., Bailey, E.R., Zhao, M., Fargo, D.C., Hwang, J.-Y., Daigle, K.R., Fenn, J.D., Adelman, K., and **Dudek, S.M.** Rapid activity-dependent transcription of *arc* and other IEGs relies on poised RNA polymerase II. Nature Neurosci. 14: 848-856, 2011.

Carlson, B.R., Lloyd, K.E., Kruszewski, A., Kim, I.H., Rodriguiz, R.M., Heindel, C., Faytell, M., **Dudek, S.M.**, Wetsel, W.C., and Soderling, S.H. WRP/srGAP3 facilitates the initiation of spine development by an inverse F-BAR domain and its loss impairs learning and memory. J. Neurosci. 31: 2447-2460, 2011.

Lee, S.E., Simons, S.B., Heldt, S.A., Zhao, M., Shroeder, J., Vellano, C.P., Cowan, P., Ramenini, S., Yates, C.K., Feng, Y., Smith, Y., Weinshenker, D., Sweatt, J.D., Ressler, K.J., **Dudek, S.M.**, and Hepler, J.R. RGS14 is a natural suppressor of both synaptic plasticity in CA2 neurons and hippocampal-based learning and memory. Proc. Natl. Acad. Sci. USA 107: 16994-16998, e-pub Sept 28, 2010.

Adams, J.P., Robinson, R.A., Hudgins, E.D., Wissink, E.M., and **Dudek, S.M.** NMDA-receptor independent nuclear signaling and *arc* expression in hippocampal slices. NeuroReport 20: 1429-1433, 2009.

^Simons, S.B., Escobedo, Y., Yasuda, R., and **Dudek, S.M.** Regional differences in hippocampal calcium handling provide a cellular mechanism for limiting plasticity, Proc. Natl. Acad. Sci. USA 106: 14080-14084, e-pub July 31, 2009.

Saha, R.N., Ghosh, A., Palencia, C.A., Fung, Y.K., **Dudek, S.M.**, and Pahan, K. Tumor necrosis factor-□ preconditioning protects neurons via neuron-specific upregulation of CREB-binding protein. J. Immunol. 183: 2068-2078, e-pub July 13, 2009.

Lundquist, J.J. and **Dudek, S.M**. Differential activation of extracellular signal-regulated kinase 1 and a related complex in neuronal nuclei. Brain Cell Biol. 35: 267-281, e-pub April 5, 2008.

#Bastrikova, N., Gardner, G., Reece, J., Jeromin, A., and **Dudek, S.M.** Synapse elimination accompanies functional plasticity in hippocampal neurons. Proc. Natl. Acad. Sci. USA 105: 3123-3127, 2008.

Zhao, M., Choi, Y.-S., Obrietan, K., and **Dudek, S.M.** Synaptic plasticity (and the lack thereof) in hippocampal CA2 neurons. J. Neurosci. 27: 12058-12066, 2007.

*Welch, J.W., Lu, J., Rodriguiz, R.M., Trotta, N.C., Peca, J., Ding, J.-D., Feliciano, C., Chen, M., Adams, J.P., Luo, J., **Dudek, S.M.**, Weinberg, R.J., Calakos, N., Wetsel, W.C., and Feng, G.P. Cortico-striatal synaptic defects and OCD-like behavior in *Sapap3*-mutant mice. Nature 448: 894-900, 2007.

Zhao, M., Adams, J.P., and **Dudek, S.M.** Pattern-dependent role of NMDA receptors in action potential generation: consequences for extracellular signal-regulated kinase activation. J. Neurosci. 25: 7032-7039, 2005.

#Dudek, S.M. and Fields, R.D. Somatic action potentials are sufficient for late-phase LTP-related cell signaling. Proc. Natl. Acad. Sci. USA 99: 3962-3967, 2002.

Perrett, S.P., **Dudek, S.M.**, Egelman, D., Montague, P.R. and Friedlander, M.J. LTD induction in adult visual cortex: role of stimulus pattern and inhibition. J. Neurosci. 21: 2308-2319, 2001.

Dudek, S.M. and Fields, R.D. MAP-Kinase/ERK phosphorylation in somato-dendritic compartments: roles of action potentials, frequency, and mode of calcium entry. J. Neurosci. 21: RC122, 2001.

Davis, P.K., **Dudek, S.M.,** and Johnson, G.V.W. Select alterations in protein kinases and phosphatases during apoptosis of differentiated PC12 cells. J. Neurochem. 68: 2338-2347, 1997.

Dudek, S.M. and Friedlander, M.J. Developmental down-regulation of LTD in cortical layer IV and its independence of modulation by inhibition. Neuron 16: 1097-1106, 1996.

Dudek, S.M. and Friedlander, M.J. Intracellular blockade of inhibitory synaptic responses in visual cortical layer IV neurons. J. Neurophysiol. 75: 2167-2173, 1996.

Dudek, S.M. and Johnson, G.V.W. Postnatal changes in serine/threonine protein phosphatases and their association with microtubules. Dev. Brain Res. 90: 54-61,1995.

Dudek, S.M. and Johnson, G.V.W. Transglutaminase facilitates the formation of polymers of the □-amyloid peptide. Brain Res. 651: 129-133, 1994.

Dudek, S.M. and Johnson, G.V.W. Transglutaminase catalyzes the formation of sodium dodecyl sulfate insoluble, Alz-50 positive polymers of tau. J. Neurochem. 61: 1159-1162, 1993.

***Dudek, S.M.** and Bear, M.F. Bidirectional long-term modification of synaptic effectiveness in the adult and immature hippocampus. J. Neurosci. 13: 2910-2918, 1993.

*Kirkwood, A., **Dudek, S.M.**, Gold, J.T., Aizenman, C.Z., and Bear, M.F. Common forms of synaptic plasticity in hippocampus and neocortex *in vitro*. Science 260: 1518-1521, 1993.

Bohner, A.P., **Dudek, S.M.**, and Bear, M.F. Effects of N-methyl-D-aspartate on quisqualate-stimulated phosphoinositide hydrolysis in slices of kitten striate cortex. Brain Res. 594: 146-149, 1992.

****Dudek, S.M.** and Bear, M.F. Homosynaptic long-term depression in area CA1 of hippocampus and the effects of NMDA receptor blockade. Proc. Natl. Acad. Sci. USA 89: 4363-4367, 1992.

Dudek, S.M. and Bear, M.F. A biochemical correlate of the critical period for synaptic modification in visual cortex. Science 246: 673-675, 1989.

Dudek, S.M., Bowen, W.D., and Bear, M.F. Postnatal changes in glutamate-stimulated phosphoinositide turnover in rat neocortical synaptoneurosomes. Dev. Brain Res. 47: 123-128, 1989.

Thibault, O., Joly, M., Muller, D., Schottler, F., **Dudek, S.**, and Lynch, G. Long-lasting physiological effects of bath applied N-methyl-D-aspartate. Brain Res. 476: 170-173, 1989.

Seubert, P., Baudry, M., **Dudek, S.**, and Lynch, G. Calmodulin stimulates the degradation of spectrin by calpain. Synapse 1: 20-24, 1987.

PREPRINTS

Toth, K., Martyn, A.C., Bastrikova, N., Kim, W., Rodriguiz, R.M., Ahmed, U., Schmalzigaug, R., **Dudek, S.M**., Wetsel, W.C., Premont, R.T. GIT2 is dispensable for normal learning and memory function due to a predominant brain GIT2 splice variant that evades GIT/PIX complexes. BioRxiv 538223, 2019. doi: 10.1101/538223.

Evans, P.R., Parra-Bueno, P., Smirnov, M.S., Lustberg, D.L., **Dudek, S.M.**, Hepler, J.T., and Yasuda, R. RGS14 restricts plasticity in hippocampal CA2 by limiting postsynaptic calcium signaling. BioRxiv 297499, 2018. doi: 10.1101/297499 (published in eNeuro)

Evans, P.R., Gerber, K.J., Dammer, E.B., Duong, D.M., Goswami, D., Lustberg, D.L., Zou, J., Yang, J.J., **Dudek, S.M.**, Griffin, P.R., Seyfried, N.T., and Hepler, J.R. Interactome analysis reveals Regulator of G Protein Signaling 14 (RGS14) is a novel calmodulin (CaM) effector in mouse brain. BioRxiv 247270, 2018. doi: 10.1101/247270 (published in J. Proteome Res.)

Tyssowski, K.M.[§], Saha, R.N.[§], DeStefino, N.R.[§], Cho, J.-H., Jones, R.D., Chang, S.M., Romeo, P., Wurzelmann, M.K., Ward, J.M., **Dudek, S.M.**[§§], Gray, J.M.[§§] Distinct neuronal activity patterns induce different gene expression programs. BioRxiv 146282, 2017. doi: 10.1101/146282 (different version published in Neuron)

Alexander, G.M., Brown, L.Y., Farris, S., Lustberg, D., Pantazis, C., Gloss, B., Plummer, N.W., Riddick, N.V., Moy, S.S., Jensen, P., and **Dudek, S.M.** CA2 neuronal activity controls hippocampal oscillations and social behavior. BioRxiv 190504, 2017. doi: 10.1101/190504 (different version published in eLife

BOOK CHAPTERS/ REVIEWS

Carstens, K.E. and **Dudek, S.M.** Regulation of synaptic plasticity in hippocampal area CA2. Curr. Opin. Neurobiol. 54: 194-199, 2019. doi: 10.1016/j.conb.2018.07.008

Dudek, S.M., Alexander, G.M. and Farris, S. Rediscovering area CA2: unique properties and functions. Nature Rev. Neurosci. 17: 89-102, 2016.

Evans, P.R., **Dudek, S.M.** and Hepler, J.R. Regulator of G Protein Signaling 14: A molecular brake on synaptic plasticity linked to learning and memory. In: Progress in Molecular Biology and Translational Science, 2015.

Farris, S. and **Dudek, S.M**. From where? Synaptic tagging allows the nucleus not to care. In: Synaptic Tagging and Capture: From Synapses to Behavior. S.K. Sajikumar, ed., Springer, 2015, p 143-153.

Saha, R.N. and **Dudek, S.M**. Splitting Hares and Tortoises: A Classification of Neuronal Immediate Early Gene Transcription Based on Poised RNA Polymerase II. Neuroscience, 247C:175-181, 2013.

Caruana, D.A., Alexander, G.M., and **Dudek, S.M.** New insights into the regulation of synaptic plasticity from an unexpected place: Hippocampal area CA2. Learning & Memory, 19: 391-400, 2012.

Vellano, C.P., Emerson Lee, S., **Dudek, S.M.**, and Hepler, J.R. RGS14 at the Interface of Hippocampal Signaling and Synaptic Plasticity. Trends in Pharm. Sci. 32: 666-674, 2011.

Saha, R. and **Dudek, S.M.** The role of action potentials in synaptic plasticity: To the nucleus and beyond. Exp. Biol. and Med. 233: 385-393. 2008.

Adams, J.P., Robinson, R.A., and **Dudek, S.M**. Role of action potentials in regulating gene transcription: relevance to LTP, In: Transcriptional Regulation by Neuronal Activity. **S.M. Dudek**, ed., Springer, pp 91-110, 2007.

Adams, J.P. and **Dudek, S.M.** Late-phase long-term potentiation: getting to the nucleus. Nature Rev. Neurosci. 6: 737-743, 2005.

Adams, J.P., Hudgins, E., Lundquist, J.J., Zhao, M., and **Dudek, S.M.** Rapid nuclear responses to action potentials. In: Synaptic Plasticity and Transsynaptic Signaling P.K. Stanton, C. Bramham, H.E. Scharfman, eds., pp 401-418, 2005.

Fields, R.D., Eshete, F., **Dudek, S.**, Ozsarac, N., and Stevens, B. Regulation of gene expression by action potentials: dependence on complexity in cellular information processing. Novartis Foundation Symposium No. 239- Complexity in information Processing. 239: 160-172, 2001.

Dudek, S.M. and Fields, R.D. Gene expression in hippocampal long-term potentiation. The Neuroscientist 5: 275-279, 1999.

Dudek, S.M. A discussion of activity-dependent forms of synaptic weakening and their possible role in ocular dominance plasticity. J. Physiol. (Paris) 90: 167-170, 1996.

Friedlander, M.J., Harsanyi, K., **Dudek, S.**, and Kara, P. Developmental mechanisms for regulating signal amplification at excitatory synapses in the neocortex. in: Neural Development and Plasticity, Prog. in Brain Res. Vol. 108, R. Mize and R. Erzurumlu, eds., 1996.

Bear, M.F. and **Dudek, S.M.** Stimulation of phosphoinositide turnover by excitatory amino acids: Pharmacology, development, and role in visual cortical plasticity. in: Activity-Driven CNS Changes in Learning and Development Ann. N.Y. Acad. Sci., Vol. 627, J. Wolpaw, J. Schmidt and T. Vaughan, eds., 1991.

PROFESSIONAL SOCIETIES

Society for Neuroscience- member since 1988
J. B. Johnston Club (evolutionary neurobiology) – 1996-2005
Society of Biological Psychiatry- member since 2009

ORGANIZED

Mini-symposium at the 2017 Annual Meeting of the Society for Neuroscience: "Big News from a Little Region: Hippocampal Area CA2"

Session on CA2 at the Spring Hippocampal Research Conference, Taormina, Sicily. June 2015

Symposium at the 2011 meeting of Society of Biological Psychiatry, Chair, "What's New in Hippocampal CA2?"

Book published by Springer Publishing on Transcriptional Regulation by Neuronal Activity, Editor. October 2007

Mini-symposium at the 2005 Annual Meeting of the Society for Neuroscience
"To the nucleus and back: understanding transcriptional regulation by activity"

Synaptic and Developmental Plasticity Interest Group at NIH, 1997-2001

SERVICE

Society for Neuroscience (SfN) Council: 2019 Treasurer, 2018 Treasurer-Elect
includes membership on SfN Investment, Publications, and Finance (Chair) Committees

Society of Biological Psychiatry Program Committee, 2017- present

NIMH Board of Scientific Councilors, ad-hoc review member, Sept. 2017

Society of Biological Psychiatry A.E. Bennett Award selection committee, 2014-present

Society for Neuroscience Program Committee, Chair, 2013-14
(Incoming Chair, 2012-13; Outgoing Chair, 2014-15)

Society for Neuroscience Meeting Software Test Group, 2010-2015

Society for Neuroscience Program Committee, 2008-2011

SCIENTIFIC PEER REVIEWER

Funding Agencies

Louisiana Board of Regents; NASA; Neurological Foundation of New Zealand; The Medical Research Council; The National Institutes of Health, Special Emphasis Panel on Synapses, Cytoskeleton and Trafficking; The National Institutes of Health, Special Emphasis Panel on Cognitive, Visual and Sensorimotor; The National Institutes of Health, Special Emphasis Panel on Neural Control; The National Institutes of Health, Synapses, Cytoskeleton & Trafficking (SYN) Study Section (ad-hoc reviewer), The National Science Foundation, ad-hoc reviewer; The National Science Foundation, Synapse Pre-Proposal Review Panel; The Wellcome Trust; United States-Israel Binational Science Foundation; German Research Foundation (DFG)

Scientific Journals

Aging, Biological Psychiatry, Brain, Brain Research, Brain Research Bulletin, Cell Reports, Cerebral Cortex, Developmental Neuroscience, eLife, eNeuro, Environmental Health Perspectives, Experimental Neurology, Frontiers in Molecular Neuroscience, Frontiers in Neuroanatomy, Genes, Brain, and Behavior, Hippocampus, Journal of Comparative Neurology, Journal of Neurodevelopmental Disorders, Journal of Neuroendocrinology, Journal of Neurophysiology, Journal of Neuroscience, Journal of Neuroscience Methods, Journal of Physiology, Molecular and Cellular Neuroscience, Molecular Neurobiology, Molecular Psychiatry, Nature, Nature Communications, Nature Neuroscience, Neural Plasticity, Neurobiology of Disease, Neuron, Neuropharmacology, Neuropsychopharmacology, NeuroReport, Neuroscience, Neuroscience Letters, NeuroSignals, PLoSOne, Proceedings of the National Academy of Science, USA, Science, Scientific Reports, Synapse, Toxicology and Applied Pharmacology, Translational Psychiatry, Visual Neuroscience; Review Editor, *Frontiers in Synaptic Neuroscience* and *Frontiers in Neuropharmacology*