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Educational and Professional History

1. Higher Education

1999-2004	Postdoctoral Fellowship Department of Anatomy and Neurobiology (Advisor: Joshua R. Sanes) Washington University School of Medicine, St. Louis, MO
1993-1999	Ph.D., Neurosciences Neurosciences Graduate Program (Advisor: Jerold Chun) University of California, San Diego, La Jolla, CA
1988-1992	B.A. *with Highest Distinction*, Psychology Northwestern University, Evanston, IL

2. Professional and Academic Positions

2017-present	Professor, Department of Biology (Primary Appointment) and Department of Psychiatry (Secondary Appointment), The University of Iowa
2017-present	Associate Director for Education and Outreach, Iowa Neuroscience Institute
2017-present	Member, Cell and Developmental Biology Graduate Program, The University of Iowa
2014-2017	Associate Professor, Department of Psychiatry, The University of Iowa (Secondary Appointment)
2011-2014	Associate Chair for Graduate Education (DGS), Department of Biology, The University of Iowa
2011-2017	Associate Professor, Department of Biology, The University of Iowa (Primary Appointment)
2010-present	Member, Genetics Graduate Program, The University of Iowa
2010-present	Affiliate Member, The Delta Center, The University of Iowa
2004-present	Member, Neuroscience Graduate Program, The University of Iowa
2004-2011	Assistant Professor, Department of Biology, The University of Iowa
1999-2004	Postdoctoral Fellow, Dept. of Anatomy and Neurobiology, Washington University School of Medicine
2001-2002	Instructor, Biology Master's Degree Program, University College, Washington University
1993-1999	Graduate Student and member of Executive Committee, Core Curriculum Committee, and Minor Proposition Committee, Neuroscience Graduate Program, University of California, San Diego

1992-1993	Research Assistant, Cognitive Neuroscience Laboratory, Rush-Presbyterian-St. Luke's Medical Center-Chicago
1992	Honors Research Student, Department of Psychology, Northwestern University
1991	Benton J. Underwood Summer Research Student, Department of Psychology, Northwestern University

3. Honors and Awards

2020	Career Development Award, The University of Iowa
2018	Outstanding Faculty Mentor Award, Graduate College, The University of Iowa
2017	Collegiate Teaching Award, CLAS, The University of Iowa
2015	Career Development Award, The University of Iowa (for collaborative research conducted Spring 2015 in Bern, Switzerland)
2004	Presidential Biological Scholar Award (*inaugural*), The University of Iowa
2000-2003	Postdoctoral Individual NRSA Award (F32), National Eye Institute
1997-1999	Predoctoral Individual NRSA Award (F31), National Institute of Mental Health
1996	Sigma Xi Small Grant-in-Aid of Research
1993-1996	National Science Foundation Graduate Fellowship Award
1992	James Alton James Scholarship, Northwestern University
1992	William Hunt Award for Outstanding Undergraduate Research, Northwestern University
1991	Benton J. Underwood Research Fellowship, Northwestern University
1991	Phi Beta Kappa Honor Society, Early Election

4. Memberships

2011-present	Elected Member, Faculty of 1000 (Neuroscience)
1993-present	Society for Neuroscience
2017-present	American Association for the Advancement of Science (AAAS)

Teaching at The University of Iowa

1. Teaching Assignments

Semester	Course #	Course Title	# Students	Contribution
2020 Spring	BIOL:3753	Developmental Neurobiology	51	50%; course designer
2019 Fall	BIOL:1251	How the Brain Works (And Why It Doesn't)	157	100%; course designer, sole instructor
2019 Spring	BIOL:3753	Developmental Neurobiology	26	50%; course designer
2018 Fall	BIOL:1251	How the Brain Works (And Why It Doesn't)	157	100%; course designer, sole instructor
2018 Spring	BIOL:3656	Neurobiology Laboratory	16	20%
2017 Fall	BIOL:1251	How the Brain Works (And Why It Doesn't)	115	100%; course designer, sole instructor

2017 Spring	BIOL:5753; NSCI:5753	Developmental Neuroscience	13	100%; course designer, sole instructor
2016 Fall	BIOL:1251	How the Brain Works (And Why It Doesn't)	157	100%; course designer, sole instructor
2016 Spring	BIOL:5753; NSCI:5753	Developmental Neuroscience	11	100%; course designer, sole instructor
2015 Fall	BIOL:1251	How the Brain Works (And Why It Doesn't)	157	100%; course designer, sole instructor
	BIOL:5653	Fundamental Neurobiology	16	1 lecture in graduate section
2015 Spring	N/A	CDA—Teaching exemption due to CDA-sponsored research with collaborator in Bern, Switzerland	N/A	N/A
2014 Fall	BIOL:1251	How the Brain Works (And Why It Doesn't)	157	100%; course designer, sole instructor
	BIOL:5653	Fundamental Neurobiology	21	1 lecture in graduate section
2014 Spring	BIOL:4753	Developmental Neurobiology	15	50%; co-instructor with Wayne Johnson
2013 Fall	BIOL:1251	How the Brain Works (And Why It Doesn't)	95	100%; new course designer, replaces 2:040
	BIOL:5653	Fundamental Neurobiology	16	1 lecture in graduate section
2013 Spring	002:184; 132:184	Developmental Neurobiology	20	100%; coordinator with some guest lecturers
2012 Fall	N/A	Teaching exemption due to extensive service as Associate Chair, revision of Biology Graduate Program as Integrated Biology Graduate Program, and development of revised course "How the Brain Works"	N/A	N/A
2012 Spring	002:184; 132:184	Developmental Neurobiology	24	100%; coordinator with some guest lecturers
2011 Fall	002:040	Biology of the Brain	42	50%; co-instructor with Dr. Jeff Denburg
	002:180; 132:180	Fundamental Neurobiology	20	1 lecture in graduate section
2011 Spring	002:184; 132:184	Developmental Neurobiology	11	100%; coordinator with some guest lecturers
2010 Fall	002:040	Biology of the Brain	50	50%; co-instructor with Dr. Jeff Denburg
2010 Spring	002:184; 132:184	Developmental Neurobiology	21	100%; coordinator with some guest lecturers
2009 Fall	002:040	Biology of the Brain	57	33%; co-instructor with Dr. Jeff Denburg
	002:180; 132:180	Fundamental Neurobiology	18	1 lecture in graduate section
2009 Spring	002:184; 132:184	Developmental Neurobiology	17	100%; coordinator with some guest lecturers
2008 Fall	002:040	Biology of the Brain	70	33%; co-instructor with Dr. Jeff Denburg
	002:180; 132:180	Fundamental Neurobiology	11	1 lecture in graduate section
2008 Spring	002:184; 132:184	Developmental Neurobiology	19	100%; coordinator with some guest lecturers

	(formerly 002:246)			
2007 Fall	002:040	Biology of the Brain	60	33%; co-instructor with Dr. Jeff Denburg
	002:180; 132:180	Fundamental Neurobiology	11	1 lecture in graduate section
2007 Spring	002:246; 132:246; 072:245	Developmental Neurobiology	9	100%; course designer and coordinator with some guest lecturers
2006 Fall	002:029	First Year Seminar: "Synapses: How Brain Cells Communicate"	15	100%; course designer
2006 Spring	002:246; 132:246; 072:245	Developmental Neurobiology	16	50%; co-coordinator with Dr. Wayne Johnson
2005 Fall	002:198	Honors Seminar in Biology	19	50%; co-instructor with Dr. Doug Houston
2005 Spring	002:200	Biology Colloquium	12	50%; co-instructor with Dr. Doug Houston
2004 Fall	132:230	Methods in Neuroscience	12	1 lecture

2. Students Supervised

Degree objective — Student name — Years — Outcome

a) Ph.D. Candidates

Affiliated Students

Camille Hanes (Neuroscience) 2019- pre-comps
David Steffen (Integrated Biology) 2017- post-comps
Stacey Peek (Neuroscience) 2016- post-comps
Kar Men Mah (Biology) 2013-17 Ph.D. 2017
*Postdoctoral Fellow, University of Miami
Michael Molumby (Genetics) 2013-17 Ph.D. 2017
*Postdoctoral Fellow, UC-San Diego/HHMI
Austin Keeler (Neuroscience) 2010-15 Ph.D. 2015
*Postdoctoral Fellow, University of Virginia
Mark Lobas (Neuroscience) 2008-13 Ph.D. 2013
*Staff Scientist, Koniku
Karry Jannie (Biology) 2006-12 Ph.D. 2012
*Science writer
Andrew Garrett (Neuroscience) 2005-09 Ph.D. 2009
*Assistant Professor, Wayne State University
Tuhina Prasad (Biology) 2004-09 Ph.D. 2009
*Quality Control Analyst, Advaxis, Inc.

Rotation Students (did not affiliate or not yet affiliated)

Berlin Mendez (Neuroscience) 2018
Liping Liu (Integrated Biology) 2014
Beth Osia (Integrated Biology) 2014
Rob Todd (Integrated Biology) 2013

Sriram Hemachandran (Integrated Biology)	2013	
Bianca Mason (Biosciences)	2012	
Ramon Galindo (Biology)	2008	
Xiaomin Xing (Biology)	2006	
Che Liu (Biology)	2005	
Zhe Wang (Biology)	2005	

Thesis Committees

Ryan Betters (Neuroscience)	2020-	pre-comps
Annette Klomp (Neuroscience)	2020-	pre-comps
Lex Gomez (Neuroscience)	2019-	pre-comps
Krislen Tison (Genetics)	2019-	pre-comps
Emily Walsh (Neuroscience)	2018-	pre-comps
Noah Armstrong (Neuroscience)	2018-	pre-comps
Tirthasree Das (Integrated Bio.)	2018-	post-comps
Ethan Bahl (Genetics)	2018-	post-comps
Rachel Schroeder (Neuroscience)	2017-	post-comps
Robert Taylor (Integrated Biology)	2017	M.S., 2017
Anthony Lilienthal (Integrated Bio.)	2017-2018	comps only
Banu Gumusoglu (Neuroscience)	2017-	post-comps
Tanner Koomar (Genetics)	2016-	post-comps
Yujia Liu (Pharmacology)	2016-	post-comps
Jada Bittle (Neuroscience)	2016-18	Ph.D., 2018
Natalya Cherepanova (Molecular Physiology and Biophysics, MSTP)	2015-	M.S., 2017
Tyson Fuller (Integrated Bio.)	2015-2019	Ph.D., 2019
Alan Plumeau (Psychology)	2015-16	M.S., 2016
Patricia Braun (Genetics)	2015-18	Ph.D., 2018
Sriram Hemachandran (Integrated Biology)	2015-2019	Ph.D., 2019
Stephanie Haase (Genetics)	2015-6	comps only
Sophia Gaynor (Genetics)	2014-18	Ph.D., 2018
Catherine Yeates (Neuroscience)	2014-18	Ph.D., 2018
Charles (Anthony) Scott (Integrated Biology)	2013-17	Ph.D., 2017
Felicia Ooi (Integrated Biology)	2013-18	Ph.D., 2018
Ashlyn Spring (Genetics)	2012-16	Ph.D., 2016
Madeliene Stump (MSTP)	2012-15	Ph.D., 2015
Kelsey Whittier (MSTP)	2011-13	Ph.D., 2013
William Todd (Psychology)	2011-12	Ph.D., 2012
Huy Nguyen (Neuroscience)	2010-13	Ph.D., 2013
Tian Yang (Biology)	2010-13	Ph.D., 2013
Karen Thompson (Biology)	2010-13	Ph.D., 2013
Jeremy Duncan (Biology)	2009-12	Ph.D., 2012
Pamela Wernett (Neuroscience)	2009-11	Ph.D., 2011

Alissa Hulstrand (Genetics)	2008-13	Ph.D., 2013
Igor Schneider (Genetics)	2008-9	Ph.D., 2009
Jeffrey Ploegstra (Science Ed.)	2008	Ph.D., 2008
John Hass (Biology)	2008	M.S., 2008
Eyo Ukpong (Biology)	2008-12	Ph.D., 2012
Hannah Klein (Neuroscience)	2007-10	Ph.D., 2010
Aislinn Williams (Neuroscience)	2006-08	Ph.D., 2008
Audrey Dickey (Neuroscience)	2006-11	Ph.D., 2011
Shannin Zevian (Biology)	2006-11	Ph.D., 2011
Patricia Schneider (Genetics)	2006-10	Ph.D., 2010

b) Master's Candidates

Lindsey Helsper (Biology)	2007-08	M.S., 2008

c) Postdoctoral Fellows

Peter Bosch (Ph.D., Victoria U., New Zealand) 2014-2019
*Research Associate, Dept. of Neurology/INI, UI
Dietmar Schreiner (Ph.D., U. Konstanz, Germany) 2007-2010
*Faculty, University of Hannover Medical School

d) Undergraduate Students

Maya Evans (Luther College) 2018
*Ph.D. program, UI
Brian Cary (Truman State U.) 2015
*Ph.D. program, Brandeis
Natasha Dutta (Biology) 2015-16
Ashley Essmann (Biology) 2014-15
Jake McDonough (Biology) 2014
Austin Marcolina (Human Phys.) 2013
Joe Nellis (Biology) 2009-10
Mitch Omar (Biology) 2009-11
* Ph.D., Yale University, 2017
Nicole Parsons (Biology) 2006

e) Honors Students

Brianna Iverson (Biology) 2019-present
Alexia Herber (Biology) 2019-present
Paula Valiño Ramos (Neurosci.) 2018-present
*ICRU Summer and AY Fellowship
Praveen Perera (Biomed. Sci.) 2017-2018
Ashton Thompson (Biology) 2017-2018
Charles Marcucci (Biology) 2016-18
*Winner, Levin Prize, MSTP (MD/PhD) student, University of Virginia
Joshua James (Biology) 2014-16
*Pursuing M.D., Carver College of Medicine, UI
*ICRU Summer and Academic Year fellow, 2015
Dillan Newbold (Biology) 2012-13
*MSTP (MD/PhD) student, Washington University

*Kirk Ferentz Summer Fellowship
*Winner, Levin Prize

Norah Koblesky (Biology) 2012-13
* Ph.D. student, University of California, San Diego

Carolyn Sleeth (Biology) 2011-12
* M.D., University of Arizona

Catherine Yeates (née Neff) (Biology)2011-12
* Ph.D., University of Iowa, 2018

Nicholas Daane (Biology) 2008

Keegan Kelsey (Biology) 2006-07
* Ph.D., Cornell University. Scientist at 23 and Me

Kristin Long (Biology) 2005-2006
*R.A. at IDT in Coralville.
*Winner, Robbie Prize

Scholarship

1. Publications

* senior or first author, major contribution
** secondary contribution
*** equal contribution, co-first or co-senior author
**** minor contribution

a) Refereed

59. Bosch, P.J., Peek, S.L., Smolikove, S., and Weiner, J. A.* (2020) Akirins in development and disease: critical roles and molecular mechanisms. *Cellular and Molecular Life Sciences,* in revision. (Invited Review)

58. Das, S., Ooi, F., Corchado, J.C., Dvorak, K., Fuller, L.C., Weiner, J.A.**, and Prahlad, V. (2020) Maternal serotonin accelerates onset of stress protection by altering histone dynamics. *eLife*, under review.

57. Taylor, S.C., Ferri, S.L., Grewal, M., Smernoff, Z., Bucan, M., Weiner, J.A.**, Abel, T., and Brodkin, E.S. (2020) The role of synaptic cell adhesion molecules and associated scaffolding proteins in social affiliative behaviors. *Biological Psychiatry*, in press.

56. Garrett, A.M., Bosch, P.J., Steffen, D.M., Fuller, L.C., Marcucci, C.G., Koch, A.A., Bais, P., Weiner, J.A.*, and Burgess, R.W. (2019) CRISPR/Cas9 interrogation of the murine *Pcdhg* gene cluster reveals a crucial isoform-specific role for *Pcdhgc4. PLoS Genetics,* 15(12):e1008554.

55. Bosch, P.J., Fuller, L.C., and Weiner, J. A.* (2019) A critical role for the nuclear protein Akirin2 in the formation of mammalian muscle *in vivo. genesis,* 57(5):e23286.

54. Bosch, P.J., Fuller, L., and Weiner, J.A.* (2018) An essential role for the nuclear protein Akirin2 in mouse limb interdigital tissue regression. *Scientific Reports*, 8:12240.

53. Molumby, M.J., Anderson, R., Newbold, D., Koblesky, N., Garrett, A.M., Schreiner, D., Radley, J.J., and Weiner, J.A.* (2017) γ-Protocadherins interact with neuroligin-1 and negatively regulate dendritic spine morphogenesis. *Cell Reports,* 18(11): 2702-2714.

52. Weiner, J.A* (2017). Protocadherins and other atypical cadherins. *Seminars in Cell and Developmental Biology*, Guest Editor of special issue and contributor. 69:69

51. Mah, K.M, and Weiner, J.A.* (2017). Regulation of Wnt signaling by protocadherins. *Seminars in Cell and Developmental Biology*, Guest Editor of special issue and contributor. 69:158-171

50. Peek, S., Mah, K.M., and Weiner, J.A.* (2017). Regulation of neural circuit formation by protocadherins. *Cellular and Molecular Life Sciences*, 74:4133-4157.

49. Lyck, R., Lécuyer, M-A., Abadier, M., Wyss, C.B., Matti, C., Rosito, M., Enzmann, G., Zeis, T., Michel, L., Garcia, A., Sallusto, F., Gosselet, Deutsch, U. Weiner, J.A.**, Schaeren-Wiemers, N, Prat, A., and Engelhardt, B. (2017). ALCAM (CD166) is involved in extravasation of monocytes rather than T cells across the blood-brain barrier. *Journal of Cerebral Blood Flow and Metabolism,* 37(8):2894-290.

48. Bosch, P.J., Fuller, L.C, Sleeth, C., and Weiner, J. A.* (2016) Akirin2 is essential for the formation of the cerebral cortex. *Neural Development,* 11:21.

47. Mah, K.M., Houston, D.H, and Weiner, J.A.* (2016) The γ-protocadherin-C3 isoform inhibits canonical Wnt signaling by binding to and stabilizing Axin-1 at the membrane. *Scientific Reports*, 6: 31665.

46. Molumby, M.J., Keeler, A.B., and Weiner, J.A.* (2016). Homophilic protocadherin cell-cell interactions promote dendrite complexity. *Cell Reports,* 15(5):1037-50.

45. Eyo, U.B., Miner, S.A., Weiner, J.A****, and Dailey, M.E. (2016). Developmental Changes in Microglial Mobilization are Independent of Natural Apoptosis in the Neonatal Mouse Hippocampus. *Brain, Behavior, and Immunity*, in press (published online Nov. 2015).

44. Keeler, A.B., Schreiner, D., and Weiner, J.A.* (2015). PKC phosphorylation of a γ-Protocadherin C-terminal lipid-binding domain regulates FAK inhibition and dendrite arborization. *Journal of Biological Chemistry,* 290:20674-86.

43. Blumberg, M.S, Coleman, C.M., Sokoloff, G., McMurray, B., Fritzsch, B., Weiner, J.A.**, and McMurray, B. (2015). Development of twitching in sleeping infant mice depends on sensory experience. *Current Biology*, 25(5):656-62.

42. Keeler, A.B., Molumby, M.J., and Weiner, J.A.* (2015). Protocadherins branch out: multiple roles in dendrite development. *Cell Adhesion and Migration,* 9(3):214-26.

41. Weiner, J.A.* and Jontes, J.D. (2013). Protocadherins, not prototypical: a complex tale of their interactions, expression, and functions. *Frontiers in Molecular Neuroscience*, 6:4. doi: 10.3389/fnmol.2013.00004.

40. Garrett, A.M., Schreiner, D., Lobas, M.A., and Weiner, J.A.* (2012). γ-protocadherins control cortical dendrite arborization by regulating a FAK/PKC/MARCKS signaling pathway. *Neuron*, 74(2):269-76

39. Lobas, M.A., Helsper, L., Vernon, C., Schreiner, D., Zhang, Y., Holtzman, M.J., and Weiner, J.A.* (2012). Molecular heterogeneity in the choroid plexus epithelium: the 22 member γ-

protocadherin family is differentially expressed, apically localized, and implicated in CSF regulation. *Journal of Neurochemistry*, 120:913-927.

38. Jannie, K.M., Stipp, C.S., and Weiner, J.A.* (2012). ALCAM regulates motility, invasiveness, and adherens junction formation in uveal melanoma cells. *PLoS ONE,* 7(6):e39330.

37. Todd, W.D., Gall, A.J., Weiner, J.A.**, and Blumberg, M.S. (2012). Distinct retinohypothalamic innervation patterns predict the developmental emergence of species-typical circadian phase preference in nocturnal Norway rats and diurnal Nile grass rats. In press, *The Journal of Comparative Neurology,* 520: 3277-3292.

36. Prasad, T. and Weiner, J.A.* (2011). Direct and indirect regulation of spinal cord Ia afferent terminal formation by the γ-Protocadherins. *Frontiers in Molecular Neuroscience*, 4:54.

35. Tan, F., Ghosh, S., Mbuenkui, F., Thomas, R., Weiner, J.A.**, and Ofori-Acquah, S.F. (2010). Essential role for ALCAM gene silencing in megakaryocytic differentiation. *BMC Molecular Biology*, 11:91.

34. Schreiner, D. and Weiner, J.A.* (2010). Combinatorial homophilic interaction between γ-protocadherin multimers greatly expands the molecular diversity of cell adhesion. *Proceedings of the National Academy of Sciences*, 107:14893-14898.

33. Marcano-Reik, A.J., Prasad, T., Weiner, J.A.**, Blumberg, M.S. (2010). An abrupt developmental shift in callosal modulation of sleep-related spindle bursts coincides with the emergence of excitatory-inhibitory balance and a reduction of somatosensory cortical plasticity. *Behavioral Neuroscience*, 124:600-11

32. Buhusi, M., Demyanenko, G.P., Jannie, K.M., Weiner, J.A.***, Maness, P.F. *** (2009). ALCAM regulates mediolateral retinotopic mapping in the superior colliculus. *Journal of Neuroscience*, 29:15630 –15641. (Co-senior author) (Featured on cover)

31. Garrett, A.M., and Weiner, J.A.* (2009). Control of CNS synapse development by γ-protocadherin-mediated astrocyte-neuron contact. *Journal of Neuroscience*, 29:11723–11731. (Featured on cover and "This Week in the Journal")

30. Culican, S.M., Bloom, A.J., Weiner, J.A.**, and DiAntonio, A. (2009). Phr1 regulates retinogeniculate targeting independent of activity and ephrin signaling. *Molecular and Cellular Neuroscience*, 41: 304-312.

29. Prasad, T., Wang, X., Gray, P.A., and Weiner, J.A*. (2008). A differential, developmental pattern of spinal interneuron apoptosis during synaptogenesis: Insights from genetic analyses of the protocadherin-γ gene cluster. *Development*, 135: 4153-4164.

28. Yamagata, M.***, Weiner, J.A.***, Dulac, C., Roth, K.A., and Sanes, J.R. (2006). Labeled lines in the retinotectal system: Markers for retinorecipient sublaminae and the retinal ganglion cell subsets that innervate them. *Molecular and Cellular Neuroscience*, 33: 296-310. (co-first author)

27. Dillon, A.K., Fujita, S.C., Matise, M.P., Jarjour, A.A., Kennedy, T.E., Kollmus, H., Arnold, H.-H., Weiner, J.A.**, Sanes, J.R., and Kaprielian, Z. (2005). Molecular control of spinal accessory motor neuron/axon development in the mouse spinal cord. *Journal of Neuroscience*, 25: 10119-10130.

26. Weiner, J.A.*, Wang, X., Tapia, J.C. and Sanes, J.R. (2005). Gamma protocadherins are required for synaptic development in the spinal cord. *Proceedings of the National Academy of Sciences*, 102: 8-14.

25. Weiner, J.A.*, Koo, S.J., Nicolas, S., Fraboulet, S., Pfaff, S.L., Pourquié, O., and Sanes, J.R. (2004). Axon fasciculation defects and retinal dysplasias in mice lacking the immunoglobulin superfamily adhesion molecule BEN/ALCAM/SC1. *Molecular and Cellular Neuroscience*, 27: 59-69. (Featured on cover)

24. Bromann, P.A., Weiner, J.A.**, Apel, E.D., Lewis, R.M., and Sanes, J.R. (2004). A putative ariadne-like E3 ubiquitin ligase (PAUL) that interacts with the muscle-specific kinase (MuSK). *Gene Expression Patterns*, 4: 77-84.

23. Washbourne, P.***, Dityatev, A.***, Scheiffele, P.***, Biederer, T.***, Weiner, J.A.***, Christopherson, K.***, and El-Husseini, A.*** (2004). Cell adhesion molecules in synapse formation. *Journal of Neuroscience*, 24: 9244-9249.

22. Yamagata, M., Sanes, J.R., and Weiner, J.A.* (2003). Synaptic adhesion molecules. *Current Opinion in Cell Biology*, 15: 621-632.

21. Yamagata, M., Weiner, J.A.**, and Sanes, J.R. (2002). Sidekicks: Synaptic adhesion molecules that promote lamina-specific connectivity in the retina. *Cell*, 110: 649-660.

20. Wang, X.***, Weiner, J.A.***, Levi, S., Craig, A.M., Bradley, A., and Sanes, J.R. (2002). Gamma protocadherins are required for survival of spinal interneurons. *Neuron*, 36: 843-854. (Co-first author)

19. Fukushima, N., Weiner, J.A.**, Kaushal, D., Contos, J.J.A., Rehen, S.K., Kingsbury, M.A., Kim, K.Y., and Chun, J. (2002). Lysophosphatidic acid influences the morphology and motility of young, postmitotic cortical neurons. *Molecular and Cellular Neuroscience*, 20: 271-282.

18. Weiner, J.A.*, Fukushima, N., Contos, J.J.A., Scherer, S.S., and Chun, J. (2001). Regulation of Schwann cell morphology and adhesion by receptor-mediated lysophosphatidic acid signaling. *Journal of Neuroscience*, 21: 7069-7078. (Featured on cover)

17. Fukushima, N., Ishii, I., Contos, J.J.A., Weiner, J.A.**, and Chun, J. (2001). Lysophospholipid receptors. *Annual Reviews in Pharmacology and Toxicology*,41: 507-534.

16. Chun, J., Weiner, J.A.**, Fukushima, N., Contos, J.J., Zhang, G., Kimura, Y., Dubin, A., Ishii, I., Hecht, J.H., Akita, C., and Kaushal, D. (2000) Neurobiology of receptor-mediated lysophospholipid signaling: From the first lysophospholipid receptor to roles in nervous system function and development. *Annals of the New York Academy of Sciences*, 905: 110-117.

15. Contos, J.J.A., Fukushima, N., Weiner, J.A.**, Kaushal, D., and Chun, J. (2000) Requirement for the *lp$_{A1}$* lysophosphatidic acid receptor gene in normal suckling behavior. *Proceedings of the National Academy of Sciences*, 97: 13384-13389.

14. Fukushima, N., Weiner, J.A.**, and Chun, J. (2000) Lysophosphatidic acid (LPA) is a novel extracellular regulator of cortical neuroblast morphology. *Developmental Biology*, 228: 6-18.

13. Zhang, G., Contos, J.J.A., Weiner, J.A.**, Fukushima, N., and Chun, J. (1999) Comparative analysis of three murine G protein-coupled receptors activated by sphingosine-1-phosphate. *Gene,* 227: 89-99.

12. Dubin, A.E., Bahnson, T., Weiner, J.A.**, Fukushima, N., and Chun, J. (1999) Lysophosphatidic acid (LPA) stimulates neurotransmitter-like conductance changes that precede GABA and L-glutamate in early, presumptive cortical neuroblasts. *Journal of Neuroscience,* 19(4): 1371-1381.

11. Marszalek, J.R., Weiner, J.A.**, Farlow, S.J., Chun, J., and Goldstein, L.S.B. (1999) Novel dendritic kinesin sorting identified by different process targeting of two related kinesins: KIF21A & KIF21B. *Journal of Cell Biology*, 145(3): 469-479.

10. Weiner, J.A.*, and Chun, J. (1999) Schwann cell survival mediated by the signaling phospholipid lysophosphatidic acid (LPA). *Proceedings of the National Academy of Sciences*, 96(9): 5233-5238.

9. Blaschke, A.J***., Weiner, J.A.***, and Chun, J. (1998) Programmed cell death is a universal feature of embryonic and postnatal neuroproliferative regions throughout the central nervous system. *Journal of Comparative Neurology,* 396: 39-50. (co-first author)

8. Weiner, J.A.*, Hecht, J.H., and Chun, J. (1998) The lysophosphatidic acid receptor gene *vzg-1/lpA1/edg-2* is expressed by mature oligodendrocytes during myelination in the postnatal murine brain. *Journal of Comparative Neurology*, 398: 587-598.

7. McWhirter, J. R., Goulding, M., Weiner, J. A.****, Chun, J. and Murre, C. (1997) A novel fibroblast growth factor gene expressed in the developing nervous system is a downstream target of the chimeric homeodomain oncoprotein E2A-Pbx1. *Development*, 124: 3221-3232.

6. Huang, L. J-s., Durick, K., Weiner, J. A.**, Chun, J., and Taylor, S. S. (1997) Identification of a novel protein kinase A anchoring protein that binds both type I and type II regulatory subunits. *Journal of Biological Chemistry*, 272(12): 8057-8064.

5. Huang, L. J-s., Durick, K., Weiner, J.A.**, Chun, J., and Taylor, S.S. (1997) D-AKAP2, a novel protein kinase A anchoring protein that contains a potential RGS domain. *Proceedings of the National Academy of Sciences*, 94: 11184-11189.

4. Weiner, J. A.* and Chun, J. (1997) *Png-1*, a nervous system-specific zinc finger gene, identifies regions containing postmitotic neurons during mammalian embryonic development. *Journal of Comparative Neurology*, 381: 130-142.

3. Weiner, J. A.* and Chun, J. (1997) Maternally-derived immunoglobulin light chain is present in the fetal mammalian cerebral cortex. *Journal of Neuroscience*, 17(9): 3148-3156.

2. Hecht, J.H., Weiner, J.A.**, Post, S. and Chun, J. (1996) *Ventricular zone gene-1* (*vzg-1*), encodes a lysophosphatidic acid receptor expressed in neurogenic regions of the developing cerebral cortex. *Journal of Cell Biology*, 135(4): 1071-1083.

1. Stebbins, G.T., Singh, J., Weiner, J.A.**, Wilson, R.S., Goetz, C.G., and Gabrieli, J.D.E. (1995) Selective impairments of memory functioning in unmedicated adults with Gilles de laTourette's syndrome. *Neuropsychology*, 9(3), 329-337.

• *Articles in Preparation for Submission*

2. Steffen, D., Mah, K.M., Ferri, S., Garrett, A.M., Abel, T., Burgess, R.W., and Weiner, J.A.* A unique role for the γ-Pcdh-C3 isoform in promoting dendrite arborization *via* Axin1. *In preparation for submission in 2020.*

1. Steffen, D., Marcucci, C.G., Molumby, M.J., Schreiner, D., and Weiner, J.A.* γ-Protocadherins regulate inhibitory synapse density through physical and functional interaction with neuroligin-2. *Drafted for submission spring 2020.*

- *Invited Book Chapters*

3. Mah, K.M., and Weiner, J.A.* (2016). "Clustered Protocadherins", in *The Cadherin Superfamily*, Hirano, S. and Suzuki, S. eds. Springer: Japan. ISBN: 978-4-431-56031-9

2. Garrett, A.M., Schreiner, D., and Weiner, J.A.* (2009). "The Cadherin Superfamily in Synapse Formation and Function" in *The Sticky Synapse,* Hortsch, M. and Umemori, H., eds. Springer: New York.

1. Weiner, J.A.* (2006). "Protocadherins and Synapse Development" in *Molecular Mechanisms of Synaptogenesis*, El-Husseini, A. and Dityatev, A., eds. Springer: New York.

b) Non-refereed abstracts (independent UI work only)

33. Steffen, D.M., Marcucci, C.G., Valiño Ramos, P., Herber, A.M., Hanes, C., Garrett, A.M., Burgess, R.W., and Weiner, J.A.*. (2019). CRISPR/Cas9 interrogation of the murine Pcdhg gene cluster reveals that both stochastically- and constitutively-expressed isoforms contribute to dendritic arborization. *Society for Neuroscience Abstracts,* Vol. 45.

32. Garrett, A.M., Bosch, P.J., Fuller, L.C., Steffen, D.M., Koch, A.A. Weiner, J.A.*, and Burgess, R.W. (2019). Crispr/Cas9 interrogation of the murine Pcdhg gene cluster reveals a crucial isoform-specific role for Pcdhgc4 in organismal and neuronal survival. *Society for Neuroscience Abstracts,* Vol. 45.

31. Mah, K.M., Steffen, D.M., Garrett, A.M., Burgess, R.W., and Weiner, J.A.* (2019). Defining molecular mechanisms through which protocadherins regulate dendrite arborization in the cerebral cortex. *Sunposium 2019, West Palm Beach, FL.*

30. Steffen, D.M., Marcucci, C.G., Molumby, M.J., Anderson, R., Radley, J.J., and Weiner, J.A.* (2019) Physical and functional interactions between gamma-protocadherins and neuroligins in synapse development. *Sunposium 2019, West Palm Beach, FL*

29. Bosch, P.J., Fuller, L.C., Peek, S.L., Parida, M., Manak, J.R. and Weiner, J.A.* (2018) Loss of Akirin2 in cortical progenitors disrupts gene expression programs that maintain proliferative state and prevent aberrant early differentiation of neurons. *Neural Development Gordon Research Conference, Newport, RI.*

28. Peek, S.L. and Weiner, J.A.* (2018). Cortical and cerebellar neurodegeneration in the absence of the nuclear protein Akirin2. *Society for Neuroscience Abstracts,* Vol. 44.

27. Garrett, A.M., Weiner, J.A.*, and Burgess, R.W. (2018). Genetic dissection of the role of gamma-protocadherin isoform diversity in neurodevelopment using CRISPR/Cas9 genome editing. *Society for Neuroscience Abstracts,* Vol. 44.

26. Steffen, D.M., Marcucci, C.G., Molumby, M.J., and Weiner, J.A.* (2018). Physical and functional interaction between gamma-protocadherins and neuroligin-2 in the development of inhibitory synapses. *Society for Neuroscience Abstracts,* Vol. 44.

25. Peek, S., Bosch, P.J., Fuller, L.C., and Weiner, J.A.* (2017). Loss of Akirin2 in astrocytes results in disrupted neuronal migration and malformation of the cerebral cortex and cerebellum. *Society for Neuroscience Abstracts,* Vol. 43.

24. Bosch, P.J., Fuller, L.C., Peek, S., Parida, M., Manak, J.R., and Weiner, J.A.* (2017). Loss of Akirin2 in cortical progenitors disrupts gene expression programs that maintain proliferative state and prevent aberrant early differentiation of neurons. *Society for Neuroscience Abstracts,* Vol. 43.

23. Mah, K., Garrett, A.M., Burgess, R.W., and Weiner, J.A.* (2017). The γ-Protocadherins regulate dendrite arborization in the cerebral cortex through both common and isoform-specific intracellular signaling mechanisms. *Society for Neuroscience Abstracts,* Vol. 43.

22. Garrett, A.M., Weiner, J.A.*, and Burgess, R.W. (2017). Neurodevelopmental consequences of reducing gamma-protocadherin isoform diversity with CRISPR/Cas9 genome editing. *Society for Neuroscience Abstracts,* Vol. 43

21. Molumby, M.J., Keeler, A.B., and Weiner, J.A.* (2015) Dendrite arborization in cortical neurons depends on γ-protocadherin-mediated homophilic matching with surrounding neurons and astrocytes. *Society for Neuroscience Abstracts,* Vol. 41

20. Bosch, P.J., Fuller, L.C, and Weiner, J.A.* (2015) Akirin2: A novel regulator of cortical development. *Society for Neuroscience Abstracts,* Vol. 41

19. Lyck, R., Wyss, C., Abadier, M. Matti, C., Deutsch, U., Enzmann, G., Weiner, J.A.**, and Engelhardt, B. (2015). Absence of activated leukocyte cell adhesion molecule (ALCAM, CD166) does not reduce $CD4^+$ effector T cell trafficking across the blood brain barrier or ameliorate experimental autoimmune encephalomyelitis. *11th Annual Cerebral Vascular Biology Meeting Abstracts.*

18. Molumby, M.J., Newbold, D.J., Schreiner, D., Koblesky, N.K., Garrett, A.M., Radley, J.J., and Weiner, J.A.* (2014). The gamma-protocadherins interact physically and functionally with the neurexin-neuroligin adhesion complex. *Society for Neuroscience Abstracts*, Vol. 40

17. Mah, K.M., and Weiner, J.A.* (2014). Differential regulation of the Wnt signaling pathway by gamma-protocadherin family proteins. *Society for Neuroscience Abstracts*, Vol. 40

16. Keeler, A.B., Molumby, M.J., and Weiner, J.A.* (2013). PKC phosphorylation of a lipid-binding domain in the gamma-protocadherin C-terminus regulates FAK activation and cortical dendrite arborization. *Society for Neuroscience Abstracts*, Vol. 39.

15. Uitermarkt, B., Sokoloff, G., Weiner, J.A.**, Fritzsch, B., and Blumberg, M.S. (2013). Newborn mice lacking muscle spindles exhibit reduced twitch-related Purkinje cell activity during active sleep. *Society for Neuroscience Abstracts*, Vol. 39.

14. Tadjalli, A., Weiner, J.A.**, Fritzsch, B., and Blumberg, M.S. (2013). Proprioceptive feedback is necessary for the generation of twitch-related spindle bursts during active sleep in newborn mice. *Society for Neuroscience Abstracts*, Vol. 39.

13. Blumberg, M.S., Coleman, C.M., McMurray, B., Gerth, A.I., Weiner, J.A.**, and Fritzsch, B. (2013). Spatiotemporal patterning of limb twitching during active sleep in newborn rats and ErbB2 knockout mice lacking muscle spindles. *Society for Neuroscience Abstracts*, Vol. 39.

12. Keeler, A., Schreiner, D., Garrett, A.M., and Weiner, J.A.* (2012). γ-Protocadherins inhibit, and are inhibited by, PKC to regulate cortical neuron dendrite arborization. *Society for Neuroscience Abstracts*, Vol. 38.

11. Weiner, J.A.*, Keeler, A., Omar, M., and Schreiner, D. (2010). Specificity of intercellular interactions regulated by the combinatorial cell-surface expression of the clustered protocadherins. *Society for Neuroscience Abstracts*, Vol. 36.

10. Garrett, A.M. and Weiner, J.A.* (2009). Regulation of cortical neuron dendrite development by the gamma-protocadherins. *Society for Neuroscience Abstracts,* Vol. 35.

9. Schreiner, D. and Weiner, J.A.* (2009). Homophilic and heterophilic cis- and trans-interactions between individual members of the gamma-protocadherin family. *Society for Neuroscience Abstracts*, Vol. 35.

8. Lobas, M.A., Schreiner, D., Vernon, C., Holtzman, M.J., and Weiner, J.A.* (2009). Molecular heterogeneity in the choroid plexus epithelium: Differential expression and apical localization of the 22-member γ-protocadherin family. *Society for Neuroscience Abstracts,* Vol. 35.

7. Prasad, T. and Weiner, J.A.* (2009). Direct and indirect control of Ia proprioceptive afferent terminal formation by the gamma-protocadherins. *Society for Neuroscience Abstracts*, Vol. 35.

6. Redensek, A., Bouhy, D., Weiner, J. A.**, and David, S. (2009). The role of ALCAM in neuropathic pain after spinal cord injury. *Society for Neuroscience Abstracts*, Vol. 35.

5. Weiner, J.A.* and Helsper, L.F. (2008). Localization of gamma-protocadherin proteins to the apical surface of choroid plexus and ependymal epithelial cells suggests novel functions distinct from cell-cell adhesion. *Society for Neuroscience Abstracts,* Vol. 34.

4. Prasad, T. and Weiner, J.A.* (2008). Mutation of the gamma-protocadherin gene cluster disrupts the formation of Ia proprioceptive afferent terminals in the developing spinal cord. *Society for Neuroscience Abstracts*, Vol. 34.

3. Bouhy, D., Redensek, A., Lopez-Valez, R., Weiner, J. A.**, David, S. (2008). ALCAM expression in the injured central and peripheral nervous systems. *Society for Neuroscience Abstracts*, Vol. 34.

2. Garrett, A.M., Wang, X., and Weiner, J.A.* (2007). The role of glial gamma-protocadherins in CNS synapse development. *Society For Neuroscience Abstracts,* Vol. 33.

1. Prasad, T. and Weiner, J.A.* (2007). Discrete populations of ventral, but not dorsal, spinal interneurons require gamma-protocadherins for synaptic connectivity and survival. *Society For Neuroscience Abstracts*, Vol. 33.

2. Published Reviews of Scholarship

Zipursky, S.L. and Sanes, J.R. (2010) Chemoaffinity revisited: Dscams, protocadherins, and neural circuit assembly. *Cell*, 143: 343-353 (lengthy discussion of research article 30)

Faculty of 1000 Biology: evaluations for Schreiner D & Weiner JA *Proc Natl Acad Sci U S A* 2010 Aug 2 : http://f1000biology.com/article/id/4816956/evaluation (discussion of research article 30)

γ-Protocadherins Mediate Astrocyte–Neuron Contacts, "This Week in the Journal", *Journal of Neuroscience,* 29: i. (discussion of research article 27)

Neurons Escape Death with γ-Protocadherins, "In this issue", *Development,* 135:2406 (discussion of research article 25)

Piechotta, K., Dudanova, I., and Missler, M. (2006). The resilient synapse: insights from genetic interference of synaptic cell adhesion molecules. *Cell and Tissue Research*, 326:617-42. (discussion of research articles 18 and 22)

Junghans, D., Haas, I.G., and Kemler, R. (2005). Mammalian cadherins and protocadherins: about cell death, synapses and processing. *Current Opinion in Cell Biology*, 17: 446-452. (discussion of research articles 18 and 22)

Protocadherins' Direct Role in Synaptic Development, "In this issue", *Proceedings of the National Academy of Sciences*, 102: 1. (discussion of research article 22)

Abbas, L. (2003). Synapse formation: Let's stick together. *Current Biology*, 13: R25-27. (discussion of research article 19)

LeBrasseur, N. (2002). SynCAM and sidekick synchronize synapse synthesis. *Journal of Cell Biology*, 158: 1155. (discussion of research article 19)

Stebbins, M. (2002). Ain't that a sidekick in the head. *Nature Medicine*, 8: 1085. (discussion of research article 19)

3. Inventions and Patents

Jerold J.M. Chun*** and Joshua A. Weiner.*** "Methods for Promoting Survival of Myelin Producing Cells". United States Patent No. 6,150,345. November 21, 2000.

4. Grants Funded

a) External

"Elucidating Functions of the Gamma-Protocadherins in CNS Development". R01 NS055272-10. NIH/NINDS. 7/1/07-5/31/21. PI. Direct Costs for 2017-2021: $1,100,000 (**Status: active. Grant has been competitively renewed twice**).

"Reducing Diversity at the Gamma Protocadherin Locus by CRISPR Targeting", R21 NS090030-01. NIH/NINDS. 9/1/14-8/31/17. Co-PI. $275,000 direct costs over 2 years ($125,000 total to Weiner as co-PI); (Status: completed)

"Keeping the Synaptic Balance: Elucidating the Regulation of Schizophrenia-linked Neuroligin Cell Adhesion Molecules" Nellie Ball Trust. 2/1/16-4/30/17. PI. $20,000 direct costs. (Status: completed)

"International Short Visit Grant", Swiss National Science Foundation (SNSF). Awarded 12/14. 7,870 CHF grant (~$8,800) for support of CDA (sabbatical) visit to the lab of Dr. Britta Engelhardt, Theodor Kocher Institute, University of Bern, Switzerland. (Status: completed)

"Control of Dendrite Arborization and Synaptogenesis by Homophilic Gamma-Protocadherin Interactions". March of Dimes. 6/1/11-5/31/15. PI Direct Costs: $252,000 (Status: completed.)

"Sleep, Proprioception, and Forebrain Activity in Infant Mutant Mice". 5 R21 NS073869. NIH/NINDS. 1/1/12-12/31/13. Co-I with Mark Blumberg. Direct Costs: $275,000 (Status: completed).

"A Role for the Gamma-Protocadherins in Neuro-Immune Interactions During Experimental Autoimmune Encephalomyelitis". National Multiple Sclerosis Society. 9/1/12-8/31/13. PI. Direct Costs: $40,000 (Status: completed).

"Administrative Supplement to R01 NS055272 for High-Quality Low-Cost Monoclonal Antibodies for Studies of the Nervous System". 3R01 NS055272-02S1. NIH/NINDS. 7/1/08-6/30/09. Principal Investigator. Direct Costs: $33,333. (Status: completed)

"The Control of CNS Synapse Development by Glial Gamma-Protocadherin Adhesion Molecules". The Roy J. Carver Charitable Trust. 3/1/07-2/28/10. Principal Investigator. Direct Costs: $309,510 (~$100,000/year) (Status: completed)

"Cell Adhesion Molecules in Synapse Formation: Roles of the Gamma-Protocadherins". Basil O'Connor Starter Scholar Research Award, March of Dimes. 2/1/07-12/31/09. Principal Investigator. Direct costs: $135,000 ($67,500/year) (Status: completed)

"The Role of Gamma-Protocadherins in Neuronal Survival". The Edward Mallinckrodt, Jr. Foundation. 3/1/05-2/28/08. Principal Investigator. Direct costs: $150,000 ($50,000/year). (Status: completed)

"*The Role of ALCAM-Mediated Adhesion and Signaling in the Development of the Choroid and the Integrity of Ocular Structure".* The E. Matilda Ziegler Foundation for the Blind, Inc. 1/05-12/07. Principal Investigator. Direct costs: $210,000 ($70,000/year). (Status: completed)

b) Internal

"Elucidating Novel Molecular Mechanisms of Neuronal and Glial Differentiation: Roles of the Essential Nuclear Protein Akirin2". Iowa Neuroscience Institute, Accelerator Grant. 1/2/18-1/2/20. Principal Investigator. Direct costs: $75,000 (Status: completed)

"Investigating the role of serotonin in modulating toxicity in proteinopathies". Center on Aging/Aging Mind and Brain Initiative. 1/2/18-1/1/19. Co-Investigator. Direct costs: $20,000 (Status: completed)

"Role of Akirin2 in the formation of the cerebral cortex". Office of the Vice President for Research and Economic Development, Internal Funding Initiative Major Project Grant. 6/1/16-5/31/17. Principal Investigator. Direct costs: $38,886 (Status: completed)

5. Funding Proposals Submitted but Not Funded

"Administrative Supplement to R01 NS055272, NIH, 6/1/20-5/31/21. PI. Total costs: $377,000 (Status: pending).

"BII-Implementation: Institute for the Research of Biological Resilience (IRBR)" NSF, 8/1/20-7/31/25. Co-PI. Total costs: $12,499,318, annual direct costs: $1,663,989 (Status: pending).

"Elucidating the function of Akirin2 in the formation of the cerebral cortex". NIH R21 NS102522. Initial submission scored at 17th percentile (Status: not funded; being rewritten as an R01).

"Elucidating Roles for the Nuclear Protein Akirin2 in the Formation of the Cerebral Cortex: Implications for Microcephaly", March of Dimes. Letter of Intent approved July 2016. Full application submitted September 2016; not funded)

"Differential Regulation of Wnt Signaling by Gamma-Protocadherin Adhesion Molecules: Molecular Mechanisms and Developmental Roles", March of Dimes. Letter of Intent approved July 2016. Full application submitted September 2016; not funded)

"Molecular Control of Synapse Formation and Patterning: Roles of Protocadherin Adhesion Molecules", The Esther A. and Joseph Klingenstein Foundation Fellowship Award in the Neurosciences (submitted 12/9/05; sought $150,000 over 3 years; status: not funded, proposal made first two cuts)

"Roles of the Gamma-Protocadherins in Synapse Development and Neuronal Survival", The Kinship Trust Searle Scholars Program (one of 2 UI nominees; submitted 9/30/05; sought $240,000 over 3 years; status: not funded)

Letter of Intent. Whitehall Foundation (submitted 10/04; status: not funded)

Application for Fellowship. The Alfred P. Sloan Foundation (submitted 9/04; sought $40,000 over 2 years; status: not funded)

6. Invited Lectures and Conference Presentations

a) International

"Match and grow: γ-protocadherin homophilic interaction promotes dendrite arborization", Invited Seminar Talk, Institut de la Vision, INSERM, Paris, France (4/20/15).

"Match and grow: γ-protocadherin homophilic interaction promotes dendrite arborization", Invited Seminar Talk, Institute for Human Genetics, University of Wuerzburg, Wuerzburg, Germany (3/23/15).

"The γ-Protocadherin adhesion molecule family: regulators of neural circuit formation (and neuro-immunology?)", Invited Seminar Talk, Theodor Kocher Institute, University of Bern, Bern, Switzerland (2/9/15)

"*The Gamma-Protocadherins: A Diverse Cell Adhesion Molecule Family Regulating Neural Circuit Formation",* Invited Seminar Talk, Vesalius Research Center, University of Leuven, Belgium (9/12/13)

"The Gamma-Protocadherins: A Diverse Cell Adhesion Molecule Family Regulating Neural Circuit Formation", Invited Seminar Talk, Biozentrum, University of Basel, Switzerland (9/10/13)

"The Brain's Diversity Initiative: Adhesive specificity, Intracellular Signaling, and Developmental Roles for the Gamma-Protocadherins", Invited Symposium Talk, 8th Annual FENS Meeting, Barcelona, Spain (7/16/12)

"Not just for neurons anymore: The diverse gamma-protocadherin family of adhesion molecules in the choroid plexus", Invited Speaker 13th International Symposium of the Blood-Brain Barrier, Zurich, Switzerland (9/3/10)

b) National

"The Ins and Outs of Protocadherins in Neural Circuit Formation" Invited Seminar Talk, Waisman Center, University of Wisconsin, Madison, WI (9/6/19)

"The Ins and Outs of Protocadherins in Neural Circuit Formation" Invited Seminar Talk, Wayne State University, Dept. of Pharmacology, Detroit, MI (3/1/19)

"The Ins and Outs of Protocadherins" Invited Seminar Talk, Sanford Research, Sioux Falls, SD (3/7/18)

"The Ins and Outs of Protocadherins in Dendrite Arborization", Invited speaker and Co-Chair, Minisymposium (session 442) on The Structure and Function of Specific Cell-Cell Interactions in Neural Development: Protocadherins and Atypical Cadherins. Society for Neuroscience Annual Meeting 2017 (11/14/17)

"The Ins and Outs of Protocadherins" Invited Seminar Talk, Department of Molecular Biosciences, University of Kansas, Lawrence, KS (10/23/17)

"Match and grow: Specificity of Protocadherin cell-cell interactions drives dendrite arbor complexity", Invited Seminar Talk, Department of Biology, Georgetown University, Washington D.C (3/31/16)

"Roles for astrocytic gamma-Protocadherin adhesion molecules in neural circuit formation", Invited Speaker, 8th Annual SoCal Symposium on Glial-Neuronal Interactions in Health and Disease, University of California, Riverside, Riverside, CA (1/9/15).

"Regulation of dendrite arborization by γ-protocadherin signaling", Invited Seminar Talk, Interdepartmental Neuroscience Graduate Program, Yale University, New Haven, CT (4/8/13).

"The γ-Protocadherins: A diverse family of adhesion molecules that regulates neural circuit formation", Invited Seminar Talk, Kansas University Medical Center, Kansas City, MO (10/12).

"The Brain's Diversity Initiative: Adhesive specificity, Intracellular Signaling, and Developmental Roles for the Gamma-Protocadherins", Invited Seminar Talk, Dept. of Neuroscience, The Ohio State University, Columbus, OH (7/11).

"The Brain's Diversity Initiative: Adhesive specificity, Intracellular Signaling, and Developmental Roles for the Gamma-Protocadherins", Invited Seminar Talk, The Jackson Laboratory, Bar Harbor, ME (6/11).

"The Brain's Diversity Initiative: Adhesive specificity, Intracellular Signaling, and Developmental Roles for the Gamma-Protocadherins", Invited Seminar Talk, Albert Einstein College of Medicine, Bronx, NY (5/11).

"Not Just for Neurons Anymore: New Roles for the Gamma-Protocadherin Adhesion Molecules in CNS Development", Invited Seminar Talk, Dept. of Biology, Brandeis University, Waltham, MA (11/30/09).

"Control of CNS Synaptogenesis by Gamma-Protocadherin-mediated astrocyte-neuron contact", Invited Speaker, Constructing Neural Circuits conference, Janelia Farm, Ashburn, VA (3/5/09).

"Regulation of Synaptogenesis and Neuronal Survival by the Gamma-Protocadherins", Invited Seminar Talk, Dept. of Biochemistry and Biophysics, University of North Carolina, Chapel Hill, NC (10/28/08).

"Gamma Protocadherins: A Diverse Family of Adhesion Molecules Required for Synaptic Integrity", Minisymposium, Invited Speaker, Society for Neuroscience Annual Meeting, San Diego, CA. (10/27/04).

c) University of Iowa

Molecular Psychiatry Seminar (10/11/17)

Biochemistry Department Seminar (3/7/17)

Neuroscience Graduate Program Seminar (1/26/10)

Dept. of Pharmacology Faculty Forum (5/2/07)

Dept. of Biological Sciences Seminar (3/5/07)

Neuroscience Graduate Program, Brain Awareness Week Retreat, Invited Speaker (4/11/06)

Dept. of Neurology, Neuroscience Lecture Series (3/10/06)

Biology Undergraduate Student (BUGS) Club (3/2/05 and 10/26/05)

Neuroscience Graduate Program Seminar (2/1/05)

Dept. of Physiology and Biophysics Seminar (11/17/04)

Service

1. Profession
   - Member, Editorial Board, *Scientific Reports*
   - Member, Editorial Board, *F1000 Research*
   - Guest Editor, special issue on "Protocadherins and Atypical Cadherins"; *Seminars in Cell and Developmental Biology*, Elsevier. Issue published August 2017
   - Ad Hoc reviewer for the following journals:

   Neuron (many)
   Journal of Neuroscience (many)
   Cell Reports (many)
   Scientific Reports (many)
   Frontiers in Molecular Neuroscience (many)
   Molecular and Cellular Neuroscience (many)

Journal of Comparative Neurology (many)
eLife (2/18)
Journal of Molecular Biology (3/20)
Cell Death and Disease (11/18)
Proceedings of the National Academy of Sciences (8/18)
Developmental Cell (6/18)
Nature Genetics (11/17, 4/19)
Structure (7/15)
Nucleic Acids Research (9/17)
Molecular and Cellular Biology (3/14)
PLoS ONE (6/12, 4/15)
Fluids and Barriers of the CNS (7/13)
GLIA (3/13)
Science (2/12)
Neuroscience (7/11, 12/11)
Experimental Cell Research (5/11)
Development (3/11, 4/13)
European Journal of Neuroscience (2/10)
Developmental Biology (10/09, 8/11)
Journal of Neurochemistry (3/09, 2/13)
Neural Development (11/06)
Mechanisms of Development (11/05)
Anatomical Record (8/06)
BMC Research Notes (7/10)

- Member, Executive Committee, Developmental Studies Hybridoma Bank
- Outside Letter Writer, Tenure and Promotion cases at: University of Idaho, Virginia Tech University, University of Nevada-Reno, Arizona State University, Sanford Research Institute
- Mail Reviewer, Israel Science Foundation, 3/19
- Mail Reviewer, Human Frontier Science Program, 10/17
- Mail Reviewer, FSR Postdoctoral Program, Belgium, 12/18
- Member, NIH/CSR Study Section NDPR (6/19, 10/19)
- Member, NIH/CSR Study Section F03A, Neurodevelopment, Synaptic Plasticity, and Neurodegeneration Fellowship panel (10/13, 2/14, 6/14, 10/14, 6/15, 3/16, 10/16, 6/17, 3/18)
- Member, NIH/CSR Study Section ZRG1 MDCN-A (02) Special Emphasis Panel (11/14, 2/12)
- Member, NIH/CSR Study Section ZRG1 MDCN-T (06) Special Emphasis Panel (4/14; 6/14)
- Ad-hoc Reviewer, Human Frontier Science Program Grants (11/17)
- Ad-hoc Reviewer, Ohio Cancer Research Associates Grant Program (4/15)
- Ad-hoc Member, Study Section, ZRG1 MDCN-T (02) Cellular and Molecular Biology of Neurodegeneration (6/13)

- Member, Study Section, ZMH1 ERB-X (03) S. RFA, US/China Program for Biomedical Collaborative Research (2/13)
- Grant Reviewer, Japan Society for the Promotion of Science (12/16)
- Grant Reviewer, Research Foundation of Flanders, Belgium (FWO) (4/13)
- Co-Editor, *Frontiers in Neuroscience* Research Topic on Neural Circuit Formation (2011-2012)
- Reviewer, Prospectus for new Developmental Neurobiology textbook, Garland Publishing (3/11)
- Reviewer, *Development of the Nervous System*, by Sanes, Reh, and Harris (3rd edition, Academic Press; 3/10)
- Grant reviewer, Medical Research Council (MRC), United Kingdom (7/10 and 10/12)
- Grant reviewer, Developmental Systems Cluster, National Science Foundation (11/07, 3/10)
- Grant reviewer, Agency for Science, Technology and Research's (A*STAR) Biomedical Research Council (BMRC), Singapore (7/07)
- Host, Developmental Neurobiology Social, Society for Neuroscience Annual Meeting, Washington, D.C. (11/14/05)

2. Department

- Co-chair, Departmental Strategic Planning Committee, 2019-2020
- Co-chair, Neuroscience Faculty Search, 2017-2018 (successful: hired Dan Summers)
- Member, Executive Committee, 2014-2019
- Member, Advisory Board, Developmental Studies Hybridoma Bank, 2010-present
- Member, 3rd Year Review Committee, Dr. Veena Prahlad, 2014-15
- Associate Chair for Graduate Education, 2011-2014 (Extensively revamped and renamed departmental graduate program to form the Integrated Biology Graduate Program [iBio])
- Chair, Neurosensory Genetics of Aging Faculty Search, 2011-2012 (successful: hired Veena Prahlad)
- Member, Biology Graduate Recruitment and Admissions Committee, 2005-2008
- Organizer, Biology Graduate Program Retreat, 2006-2013. I initiated this overnight, off-site retreat, made all arrangements with hotels and meeting sites, and coordinated the day's events with office staff. With fellow GRAC members, I recruited outside and internal speakers and devised the program.
- Member, Biology Graduate Program Task Force, 2008-2009. Charged with making improvements to, and correcting perceived problems with, the progress of graduate students through our Ph.D. program. I personally devised a new two-part comprehensive/qualifying exam structure and wrote a proposal for the department's approval. This new exam structure was approved by the departmental faculty and is currently in use.

- Contributor, NIH P30 Center grant application. P30 grant was awarded 2010.
- Contributor, CCG instrumentation grant applications.
- Contributor, Introduction to Research Methods course for 1st year Biology Ph.D. students, 2007 and 2008.

3. College

- CLAS Promotion and Tenure Committee (Collegiate Consulting Group) 2018-present
- CLAS representative, Graduate Council, 2017-2019
- Member, 20/20 Committee on collegiate reorganization, 2017-2019
- Member, Biology DEO Search Committee, 2007-2008

4. University

- Member, Faculty Search Committee, Iowa Neuroscience Institute, 2018-present
- Panel participant, Internal Review of Department of Philosophy, 10/28/19
- Panelist, Top Scholar Visit Day, University Admissions, 9/21/19
- Member, Internal Review Committee, Department of Microbiology, 2014
- Member, Curriculum Committee, Neuroscience Graduate Program, 2013
- Chair, Neuroscience Graduate Program Recruitment and Admissions Committee, 2011-2012
- Member, Neuroscience Graduate Program Recruitment and Admissions Committee, 2008-2012
- Invited Lecturer, 2005 Biosciences Summer Undergraduate Program, Survival Skills Workshop for Young Researchers (7/21/05)

5. Community

- Organizer, “A Voice for Autism” Iowa Neuroscience Institute event, 4/18
- Presenter, “Girls Go STEM!”, mini-medical school event, 12/5/15
- Presenter, “The Language of the Brain”, World Canvass program, UITV, taped 5/9/14
- Participant, Brain Awareness Week activities, Neuroscience Graduate Program, 2007-2008