

Gregorio Valdez, Ph.D.

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I. Position and Appointment

EDUCATION

1996	B.S. (Biochemistry)	Lehman College	Bronx, NY
2005	Ph.D. (Neuroscience)	Stony Brook University	Stony Brook, NY

POSTDOCTORAL TRAINING

2005-2012	Postdoctoral Fellow Advisor: Joshua R. Sanes	Harvard University	Cambridge, MA
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ACADEMIC APPOINTMENTS

1996 - 1999	Lab Manager Supervisor: Simon Halegoua	Stony Brook University	Stony Brook, NY
2012 - 2018	Assistant Professor Department of Biological Sciences	Virginia Tech	Blacksburg, VA
2012 - 2018	Director Imaging Core Facility	Virginia Tech	Blacksburg, VA
2012 - 2018	Director Aging Track for TBMH Ph.D. program	Virginia Tech	Blacksburg, VA
2018 - 2019	Associate Professor Department of Biological Sciences	Virginia Tech	Blacksburg, VA
2019 - Present	Associate Professor MCB Department	Brown University	Providence, RI
2021 - 2024	Co-Director MCB Graduate Program	Brown University	Providence, RI
2025 - Present	Professor MCB Department	Brown University	Providence, RI

II. Honors and Awards

2018	College of Science Diversity Award, Virginia Tech
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2018	Exemplary Research Outreach, Roanoke Valley Governor's School
2017	Teaching Excellence Award, Virginia Tech
2015	Co-Honoree at Blue Ridge Division of the March of Dimes
2014	Hokies Wellness, Supervisor Spotlight Award, Virginia tech
2010	Underrepresented Minority Scholarship, Keystone Symposia
2010	Post-doctoral F32 Fellowship from NIH
2006	Carl Storm URM Fellowship, Gordon Research Conference
1996	Undergraduate Fellowship, Minority Biomedical Research Support (MBRS/NIH)

RESEARCH FUNDING

Pending

2026 - 2031	National Institute of Health/ NINDS R01 (PI: Valdez) Targeting the purinergic receptor P2Y12 to treat ALS by preserving the neuromuscular junction''
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Active

2025 - 2027	Department of Defense/DoD Therapeutic Idea Award (PI: Valdez) Optimizing Clopidogrel to treat ALS
2024 - 2026	Dr. Ralph and Marian Falk Medical Research Trust Awards Program (PI: Valdez) Repurposing Clopidogrel to treat ALS
2025 - 2030	National Institute of Health/NIGMS T32 (MPI: Larschan, Johnson and Valdez) Interdisciplinary and Inclusive Predoctoral Training in Molecular, Cellular, and Biochemical Sciences
2026 - 2027	Zimmerman Carney Innovation Award/Brown University (PI: Valdez) Boosting FGFBP1 to protect the neuromuscular junction and treat amyotrophic lateral sclerosis
2026 - 2027	Brown Biomedical Innovations/Brown University (PI: Valdez) Systemic Delivery of FGFBP1 to muscles as a therapeutic strategy for ALS

Completed

2024 - 2025	DEARS Foundation (PI: Valdez) Generate pre-clinical data to use Clopidogrel to treat individuals suffering with ALS
2021 - 2025	National Institute of Health/NINDS R01 (PI: Morrow; co-I: Valdez) Mechanisms of disease and treatment in novel metabolic developmental brain disorders
2023 - 2025	National Institute of Health/NIA R21 (PI: Valdez; co-I: Beura) Development of a microbial-rich exposure regimen to accelerate translational research using mouse models of Alzheimer's Disease to humans
2023 - 2024	National Institute of Health/NIA R56 (PI: Valdez) Role of synaptic Schwann cells in NMJ and skeletal muscle aging

2023 - 2024	DEARS Foundation (PI: Valdez) Generate pre-clinical data to use Clopidogrel to treat individuals suffering with ALS
2023 - 2024	Zimmerman Carney Innovation Award/Brown University (PI: Valdez) Defining the contribution of ovaries to the onset and progression of Alzheimer's Disease
2017 - 2023	National Institute of Health/NIA R01 (PI: Valdez) Targeting the fibroblast growth factor binding protein-1 to slow degeneration of neuromuscular junctions
2022 - 2023	Seed Award/Brown University (PI: Valdez) Targeting purinergic receptors in synaptic glia to treat ALS
2022 - 2023	Zimmerman Carney Innovation Award/Brown University (PI: Valdez) Optimizing housing conditions to accelerate the translation of research using mouse models of Alzheimer's Disease
2020 - 2022	Dr. Ralph and Marian Falk Medical Research Trust Awards Program Development of a Preventive Treatment for a Novel Neurometabolic Disorder in Childhood
2017 - 2022	Takeda Pharmaceuticals The effect of MKC231 compared to pyridostigmine in an MG animal model
2020 - 2021	National Institute of Health/NIA R01 Supplement (PI: Valdez) Alzheimer's Supplement for "Targeting the Fibroblast Growth Factor Binding Protein-1 to Slow Degeneration of Neuromuscular Junctions"
2018 - 2021	National Institute of Health/NINDS (PI: Valdez) Analysis of sensory neurons to understand and identify factors to treat ALS
2018 - 2019	National Institute of Health/NIA R01 Administrative supplement (PI: Valdez) Administrative supplement for "Targeting the fibroblast growth factor binding protein-1 to slow degeneration of neuromuscular junctions"
2017 - 2018	National Institute of Health/NIA R56 (PI: Valdez) Dysregulated cholinergic transmission contributes to aging of the lower Motor system
2013 - 2018	National Institute of Health/NIH BEST Award (PI: Van Wart and Friedlander) Mentorship and development program for biomedical trainees.
2015 - 2016	National Institute of Health/NIA R56 (PI: Valdez) Synaptic FGFs are required and sufficient to maintain and repair aged NMJs
2013 - 2016	National Institute of Health/NINDS K01 (PI: Valdez) Role of target-derived FGFs in maintaining and repairing synapses
2015 - 2016	Virginia Center on Aging (PI: Valdez) Controlling neuronal sphingosine-1-phosphate as Alzheimer's disease therapy
2014 - 2015	National Institute of Health/NIA Subcontract (PI: Valdez) Subcontract from Rush University Medical Center for "Brain and spinal cord microvascular pathology in late-life motor impairment."

2013 - 2014 **CTSI-CN VT Collaborative grant** (PI: Valdez and Liu)
Cellular and molecular basis of focal refractory epilepsies

2008 - 2011 **National Institute of Health/NIA F32** (PI: Valdez)
Molecular basis of age-related synaptic alterations

III. Publications

Peer-reviewed publications

& = Postdoc from my lab

= Graduate student from my lab

^ = Medical Student from my lab

% = Research assistant from my lab

\$ = Undergraduate student from my lab

1. Han G, Hasan MH, Adesioye O, Ramprashad JC, **Valdez G**, Vaishnava S, Beura LK. A gavage-fomite based method to generate mouse models with natural microbiota. **bioRxiv** (Preprint). 20206.
2. Lopes MC[#], Avila MF[#], Soepriatna A, Hart CC, Taetzsch T, Coulombe K, Hammers DW, **Valdez G**. Rats lacking emerlin develop muscle pathologies and molecular alterations found in humans with X-linked EDMD. **Hum Mol Genet**. 2026.
3. Guzman SD, Fraczek PM, Itsani K, Furati EK, Juros D, Kenney G, **Valdez G**, Chakkalakal JV, Aguilar CA. Age-Associated Dysregulation of Postsynaptic Mitochondria Perturbs Reinnervation Kinetics. **Aging Cell**. 2026.
4. Rogina B,... **Valdez G**, ... Rappaport N. Symposia Report of The Annual Biological Sciences Section Meeting of the Gerontological Society of America 2023, Tampa, Florida. **The Journals of Gerontology, Series A: Biological Sciences and Medical Sciences**.
5. Hastings RL[&], Boyce W^{\$}, Juros D^{\$}, Kim J^{\$}, Khan Z^{\$}, Sethi A^{\$}, **Valdez G**. Loss of COL20A1 in Schwann Cells Alters Regeneration of the Neuromuscular Junction and Locomotor Activity in Mice. **Journal of Molecular Neuroscience**.
6. Mueller KA, Suneby EG[#], Ferola MH, Moreno AJ, Kidd JD, T K, Vieira FG, **Valdez, G**, Hatzipetros, T. Comprehensive characterization and validation of the Prp-hPFN1G118V mouse model: Guidelines for preclinical therapeutic testing for ALS. **Neurobiology of Disease**.
7. Juros D^{\$}, Hastings RL[&], Pendragon A, Kay J, **Valdez G**. Loss of MEGF10 Decreases the Number of Perisynaptic Schwann Cells and Innervation of Neuromuscular Junctions in Aging Mice. **Journal of the Peripheral Nervous System**.
8. Juros D^{\$}, Avila MF[#], Hastings RL[&], Pendragon A, Wilson L, Kay J, **Valdez G**. Cellular and molecular alterations to muscles and neuromuscular synapses in a mouse model of MEGF10-related myopathy. **Skelet Muscle**. 2024 May 17;14(1):10. doi: 10.1186/s13395-024-00342-6.
9. Hastings RL[&], **Valdez G**. Origin, identity, and function of terminal Schwann cells. **Trends Neurosci**. 2024 Jun;47(6):432-446. doi: 10.1016/j.tins.2024.03.007. Epub 2024 Apr 24.

10. Castro RW[#], Lopes MC[#], De Biase LM, **Valdez G**. Aging spinal cord microglia become phenotypically heterogeneous and preferentially target motor neurons and their synapses. **Glia**. 2024 Jan;72(1):206-221. doi: 10.1002/glia.24470. Epub 2023 Sep 22.
11. Hastings RL[&], Avila MF[#], Suneby E[#], Juros D^{\$}, O'Young A^{\$}, Peres da Silva J^{\$}, **Valdez G**. Cellular and molecular evidence that synaptic Schwann cells contribute to aging of mouse neuromuscular junctions. **Aging Cell**. 2023 Nov;22(11):e13981. doi: 10.1111/accel.13981. Epub 2023 Sep 28.
12. Castro RW[#], Lopes MC[%], Settlege RE, **Valdez G**. Aging alters mechanisms underlying voluntary movements in spinal motor neurons of mice, primates, and humans. **JCI Insight**. 2023 May 8;8(9):e168448. doi: 10.1172/jci.insight.168448.
13. Procacci NM, Hastings RL[&], Aziz AA, Christiansen NM, Zhao J, DeAngeli C, LeBlanc N, Notterpek L, **Valdez G**, Gould TW. Kir4.1 is specifically expressed and active in non-myelinating Schwann cells. **Glia**. 2023 Apr;71(4):926-944. doi: 10.1002/glia.24315. Epub 2022 Dec 8.
14. Doss SV[&], Barbat-Artigas S, Lopes M[%], Pradhan BS, Prószyński TJ, Robitaille R, **Valdez G**. Expression and Roles of Lynx1, a Modulator of Cholinergic Transmission, in Skeletal Muscles and Neuromuscular Junctions in Mice. **Front Cell Dev Biol**. 2022 Mar 16;10:838612. doi: 10.3389/fcell.2022.838612. eCollection 2022.
15. Shapiro D[#], Massopust R[&], Taetzsch T[&], **Valdez G**. Argonaute 2 is lost from neuromuscular junctions affected with amyotrophic lateral sclerosis in SOD1^{G93A} mice. **Sci Rep**. 2022 Mar 17;12(1):4630. doi: 10.1038/s41598-022-08455-y.
16. Massopust R[&], Juros D, Shapiro D[#], Lopes M[%], Halder SM, Taetzsch T[&], **Valdez G**. KLF15 overexpression in myocytes fails to ameliorate ALS-related pathology or extend the lifespan of SOD1G93A mice. **Neurobiology of Disease**. 2022 Jan;162:105583. doi: 10.1016/j.nbd.2021.105583. Epub 2021 Dec 11.
17. Larouche J,... Hastings RL[&],... **Valdez G**,... et al Murine muscle stem cell response to perturbations of the neuromuscular junction are attenuated with aging. **Elife**. 2021 Jul 29;10:e66749. doi: 10.7554/eLife.66749.
18. Brayman VL[#], Taetzsch T[&], Miko M, Dahal S, Risher WC, **Valdez G**. Role of the synaptic molecules Hevin and SPARC in mouse neuromuscular junction development and repair. **Neurosci Lett**. 2021 Jan 22;135663. doi: 10.1016/j.neulet.2021.135663. Online ahead of print.
19. Taetzsch T[&], Shapiro D[#], Eldosougi R, Myers T, Settlege R, **Valdez G**. The microRNA, miR-133b, functions to slow Duchenne muscular dystrophy pathogenesis. **J Physiol**. 2021 Jan;599(1):171-192. doi: 10.1113/JP280405. Epub 2020 Oct 24.
20. Castro R[#], Taetzsch T[&], Vaughan SK[&], Godbe K[^], Chappell J, Settlege R, **Valdez G**. Specific labeling of synaptic Schwann cells reveals unique cellular and molecular features, **eLife**, 2020. doi: 10.7554/eLife.56935.
21. Vaughan SK[&], Sutherland NM[^], **Valdez G**. Attenuating Cholinergic Transmission Increases the Number of Satellite Cells and Preserves Muscle Mass in Old Age. **Front Aging Neurosci**. 2019 Sep 24;11:262. doi: 10.3389/fnagi.2019.00262. eCollection 2019.
22. Hyer M, Dyer S, Kloster A, Adrees A, Taetzsch T[&], Feaster J, **Valdez G**, Neigh G. Sex modifies the

- consequences of extended fructose consumption on liver health, motor function, and physiological damage in rats. **Am J Physiol Regul Integr Comp Physiol**. 2019 Dec 1;317(6):R903-R911. doi: 10.1152/ajpregu.00046.2019. Epub 2019 Sep 25.
23. Zeitz MJ, Calhoun PJ, James CC, Taetzsch T[&], George KK, Robel S, **Valdez G**, Smyth JW. Dynamic UTR Usage Regulates Alternative Translation to Modulate Gap Junction Formation during Stress and Aging. **Cell Rep**. 2019 May 28;27(9):2737-2747.e5. doi: 10.1016/j.celrep.2019.04.114.
 24. **Valdez G**. Effects of disease-afflicted and aging neurons on the musculoskeletal system. **Bone**. 2019 May; 122:31-37. Doi: 10.1016/j.bone.2019.01.023. Epub 2019 Jan 26.
 25. Vaughan SK[#], Sutherland NM[^], Zhang S, Hatzipetros T, Vieira F, **Valdez G**. The ALS-inducing factors, TDP43^{A315T} and SOD1^{G93A}, directly affect and sensitize sensory neurons to stress. **Sci Rep**. 2018 Nov 8;8(1):16582. doi: 10.1038/s41598-018-34510-8.
 26. Herskovits AZ, Hunter TA, Maxwell N[%], Pereira K, Whittaker CA, **Valdez G**, Guarente LP. SIRT1 deacetylase in aging-induced neuromuscular degeneration and amyotrophic lateral sclerosis. Accepted in **Aging Cell**. 2018 Dec;17(6):e12839. doi: 10.1111/accel.12839. Epub 2018 Oct 8.
 27. Magalhães-Gomes MPS, Motta-Santos D, Schetino LPL, Andrade JN, Bastos CP, Guimarães DAS, Vaughan SK[#], Martinelli PM, Guatimosim S, Pereira GS, Coimbra CC, Prado VF, Prado MAM, **Valdez G**, Guatimosim C. Fast and slow-twitching muscles are differentially affected by reduced cholinergic transmission in mice deficient for VACHT: A mouse model for congenital myasthenia. **Neurochem Int**. 2018 Jul 9;120:1-12. doi: 10.1016/j.neuint.2018.07.002.
 28. Taetzsch T[&], **Valdez G**. NMJ maintenance and repair in aging. **Current Opinion in Physiology**. <https://doi.org/10.1016/j.cophys.2018.05.007>.
 29. Taetzsch T[&], Brayman VL[#], **Valdez G**. FGF binding proteins (FGFBPs): Modulators of FGF signaling in the developing, adult and stressed nervous system. **Bichim Biophys. Acta**. 2018 Jun 12. pii: S0925-4439(18)30213-8. doi: 10.1016/j.bbadis.2018.06.009. Review.
 30. Maxwell N[%], Castro RW[#], Sutherland NM[%], Vaughan KL, Szarowicz MD, de Cabo R, Mattison JA, **Valdez G**. α -motor are spared from aging while their synaptic inputs degenerate in monkeys and mice. **Aging Cell**. doi: 10.1111/accel.12726. Accepted 11 Dec 2017.
 31. Li P, Fu X, Smith NA, Ziobro J, Curiel J, Tenga MJ[&], Martin B, Freedman S, Cea-Del Rio CA, Oboti L, Tsuchida TN, Oluigbo C, Yaun A, Magge SN, O'Neill B, Kao A, Zelleke TG, Depositario-Cabacar DT, Ghimbovschi S, Knoblach S, Ho CY, Corbin JG, Goodkin HP, Vicini S, Huntsman MM, Gaillard WD, **Valdez G**, Liu JS. Loss of CLOCK results in dysfunction of brain circuits underlying focal epilepsy. **Neuron**. 2017 Oct 11;96(2):387-401.e6. doi: 10.1016/j.neuron.2017.09.044.
 32. Stockinger J^{\$}, Maxwell N[%], Shapiro D[#], deCabo R, **Valdez G**. Caloric restriction mimetics slow aging of neuromuscular synapses and muscle fibers. **Journal of Gerontology: Biological Sciences**. 2017 March 7. doi: 10.1093/gerona/glx023.
 33. Taetzsch TT[&], Tenga M[&], **Valdez G**. Muscle fibers secrete FGFBP1 to slow degeneration of neuromuscular synapses during aging and progression of ALS. **Journal of Neuroscience**. 2017 Jan 4;37(1):70-82. doi: 10.1523/JNEUROSCI.2992-16.2016.
 34. Sugita S[&], Fleming LL^{\$}, Wood C^{\$}, Vaughan SK[#], Gomes MPSM, Camargo W, Naves LA, Prado VF, Prado MAM, Guatimosim C, **Valdez G**. VACHT overexpression increases acetylcholine at the synaptic

- cleft and accelerates aging of neuromuscular junctions. **Skeletal Muscle**. 2016 Oct 5;6:31. eCollection 2016.
35. Vaughan SK[#], Stanley OL^{\$}, **Valdez G**. Impact of aging on proprioceptive sensory neurons and intrafusal muscle fibers in mice. **Journal of Gerontology: Biological Sciences**. 2017 Jun 1;72(6):771-779. doi: 10.1093/gerona/glw175.
 36. Dalkin W[^], Taetzsch TT[&], **Valdez G**. The Fibular Nerve Injury Method: A Reliable assay to identify and test factors that repair neuromuscular junctions. **J Vis Exp**. 2016 Aug 11;(114). doi: 10.3791/54186.
 37. Vaughan SK[#], Kemp Z^{\$}, Hatzipetros T, Vieira F, **Valdez G**. Degeneration of proprioceptive sensory nerve endings in mice harboring amyotrophic lateral sclerosis-causing mutations. **J Comp Neurol**. 2015 Dec 1;523(17):2477-94. doi: 10.1002/cne.23848. Epub 2015 Jul 21.
 38. Dittmar WJ[^], McIver L, Michalak P, Garner HR, **Valdez G**. EvoCor: a platform for predicting functionally related genes using phylogenetic and expression profiles. **Nucleic Acids Research**. 2014 Jul;42(Web Server issue):W72-5. doi: 10.1093/nar/gku442. Epub 2014 May 21.
 39. **Valdez G.***, Hayer MP, Feng G, Sanes JR. The role of muscle microRNAs in repairing the neuromuscular junction. **PLoS ONE**. 2014 Mar 24;9(3):e93140. doi: 10.1371/journal.pone.0093140. eCollection 2014. (* **Corresponding Author**)
 40. Samuel MA, **Valdez G**, Tapia JC, Lichtman JW, Sanes JR. Agrin and synaptic laminin are required to maintain adult neuromuscular junctions. **PLoS One**. 2012;7(10):e46663. doi: 10.1371/journal.pone.0046663.
 41. **Valdez G**, Tapia JC, Lichtman JW, Fox MA, Sanes JR. Shared resistance to aging and ALS in neuromuscular junctions of specific muscles. **PLoS One**. 2012;7(4):e34640.
 42. Philippidou P, **Valdez G**, Akmentin W, Bowers WJ, Federoff HJ, Halegoua S. Trk retrograde signaling requires persistent, Pincher-directed endosomes. **Proc Natl Acad Sci U S A**. 2011 Jan 11;108(2):852-7. doi: 10.1073/pnas.1015981108.
 43. Carlson SS, **Valdez G**, Sanes JR. Presynaptic calcium channels and alpha3-integrins are complexed with synaptic cleft laminins, cytoskeletal elements and active zone components. **J Neurochem**. 2010 Nov;115(3):654-66. doi: 10.1111/j.1471-4159.2010.06965.x.
 44. **Valdez G**, Tapia JC, Kang H, Clemenson GD Jr, Gage FH, Lichtman JW, Sanes JR. Attenuation of age-related changes in mouse neuromuscular synapses by caloric restriction and exercise. **Proc Natl Acad Sci U S A**. 2010 Aug 17;107(33):14863-8. doi: 10.1073/pnas.1002220107.
 45. Williams AH*, **Valdez G***, Moresi V, Qi X, Richardson JA, Elliott JL, Bassel-Duby R, Sanes JR, Olson EN. Regulation of Neuromuscular Synapse Regeneration by microRNA 206. **Science**. 2009 Dec 11;326(5959):1549-54. doi: 10.1126/science.1181046. (* **Co-First Authors**)
 46. Proszynski TJ, Gingras J, **Valdez G**, Krzewski K, Sanes JR. Podosomes are present in a postsynaptic apparatus and participate in its maturation. **Proc Natl Acad Sci U S A**. 2009 Oct 27;106(43):18373-8. doi: 10.1073/pnas.0910391106.

47. Bonanomi D, Fornasiero EF, **Valdez G**, Halegoua S, Benfenati F, Menegon A, Valtorta F. Identification of a developmentally-regulated pathway of membrane retrieval in neuronal growth cones. **J Cell Sci**. 2008 Nov 15;121(Pt 22):3757-69. doi: 10.1242/jcs.033803.
48. Nishimune H, **Valdez G**, Miner JH, Sanes JR. Laminins promote postsynaptic maturation by an autocrine mechanism at the neuromuscular junction. **J Cell Biol**. 2008 Sep 22;182(6):1201-15. doi: 10.1083/jcb.200805095.
49. **Valdez G**, Philippidou P, Rosenbaum J, Akmentin W, Shao Y, Halegoua S. Trk-signaling endosomes are generated by Rac-dependent macroendocytosis. **Proc Natl Acad Sci U S A**. 2007 Jul 24;104(30):12270-5.
50. **Valdez G**, Akmentin W, Kuruvila R, Ginty D. D., Halegoua S. Pincher-mediated macroendocytosis underlies retrograde signaling by neurotrophin receptors. **J Neurosci**. 2005 May 25;25(21):5236-47.
51. Kuruvilla R, Zweifel LS, Glebova NO, Lonze BE, **Valdez G**, Ye H, Ginty DD. A neurotrophin signaling cascade coordinates sympathetic neuron development through differential control of TrkA trafficking and retrograde signaling. **Cell**. 2004 118:243-55.
52. Wang S, Liu Y, Adamson CL, **Valdez G**, Guo W, Hsu SC. The mammalian exocyst, a complex required for exocytosis, inhibits tubulin polymerization. **J Biol Chem**. 2004 279:35958-66.
53. Shao Y, Akmentin W, Toledo-Aral JJ, Rosenbaum J, **Valdez G**, Cabot JB, Hilbush BS, Halegoua S. Pincher, a pinocytic chaperone for nerve growth factor/TrkA signaling endosomes. **J Cell Biol**. 2002 157:679-91.
54. Wurtzel ET, **Valdez G**, Matthews PD. Variation in expression of carotenoid genes in transformed E. coli strains. **Bioresearch Journal**. 1997. 1: 1-11.
55. Wurtzel ET, Li Z-h, Luo R, Matias D, Mozoub D, Matthews PD, Upasani VN, **Valdez G**, Yoganathan A, Yu J. Research towards improvement of the pro-vitamin A (carotenoid) content of rice endosperm. **International Rice Research Notes**. 1996. 21, 43–44.

Book Chapter

1. Formation and maturation of the neuromuscular junction. Comprehensive Developmental Neuroscience, Induction and Patterning of the CNS and PNS: Editors-in-Chief: John Rubenstein and Pasko Rakic. June, 2020.

IV. Teaching and Mentoring

Mentoring and Advising Responsibilities

Postdoctoral fellows mentored

Dr. Robert Louis Hastings, PhD. 2020 – current.

Dr. Thomas Taetzsch, PhD. 2015 – 2024 (Programmatic support specialist at the NIH).

Dr. Sydney Vaughan, PhD. 2019-2020 (Postdoc at the Mayo Clinic in Jacksonville, FL).

Dr. Elizabeth Allen, PhD. 2020 – 2022 (Scientist in biotech, Boston).
Dr. Ryan Massopust, PhD. 2020 – 2022 (Scientist in biotech, North Carolina).
Dr. Milagros Tenga, PhD. 2012 – 2015 (Scientist in biotech, North Carolina).
Dr. Sihui Zhang, PhD. 2013 – 2014 (Scientist in biotech, China).
Dr. Satoshi Sugita, PhD. 2015 – 2016 (Scientist in biotech, Japan).

Graduate students mentored

Emma Suneby - graduate student, MCB graduate program, Brown University (2021-current)
Mary Flordelys Avila - graduate student, Pathology graduate program, Brown University (2021-current)
Mikayla Lopes - graduate student, MCB graduate program, Brown University (2022-current)
Dallis Sergio - graduate student, Pathology graduate program, Brown University (2022-current)
Dillon Shapiro - graduate student, MCB graduate program, Brown University (2019-2024 – awarded PhD in 2024; Postdoc at Harvard)
Ryan Castro - graduate student, Neuroscience graduate program, Brown University (2016-2023 – awarded PhD in 2023; Postdoc at Harvard)
Sydney K. Vaughan - graduate student, TBMH program, VT (2015-2019 – awarded PhD in 2019)

Medical students mentored

Natalia Sutherland, medical student, VTCSOM (2018-2019)
Kerilyn Godbe, medical student, VTCSOM (2017-2019)
Hailey Gosnell, medical student, VTCSOM (2017-2019)
Kevin Staggenborg, medical student, VTCSOM (2015-2019)
Zainab Ibrahim, medical student, VTCSOM (2015-2019)
Williams Dalkin, medical student, VTCSOM (2013-2017)
W. James Dittmar, medical student, VTCSOM (2012-2016)

Undergraduate students mentored:

Alexa Barbosa, Brown University (2024-current)
Dillon Salvin, Brown University (2024-current)
Lily Budnick, Brown University (2024-current)
Jacob Flaks, Brown University (2024-current)
Drew Kim, Brown University (2024-current)
Graham Israeli, Brown University (2024-current)
Lily Welsh, Brown University (2023-current)
Connor Smith, Brown University (2023-current)
Julia Boscardin, Brown University (2023-current)
Natalia Begara Criado, Brown University (2023-current)
William Boyce, Brown University (2022-current)
Mia Kantorovich, Brown University (2022-current)
Liam Wilson, Brown University (2022-current)
Jinho Kim, Brown University (2022-current)
Aatish Sethi, Brown University (2022-current)
Fernanda Coello Carmona, Brown University (2021-2024) **Research Assistant at University of California, San Francisco in San Francisco, CA*
Dennis Kinyua, Brown University (2020-2023) **Research Technician at Memorial Sloan Kettering Cancer Center New York, NY*
Adam Fogel, Brown University (2020-2021) **Attending medical school at Washington University School of Medicine in St. Louis, MO*
Devin Juros, Brown University (2020-2023) **Attending graduate school at Yale University in New Haven, CT*

Anson O'Young, Brown University (2019-2022) **Attending medical school at Temple University in Philadelphia, PA*

Jessica Chau, Brown University (2019-2022) **Clinical Research Assistant at Boston Children's Hospital in Boston, MA*

Noel Kim, Brown University (2019-2022) **Attending dental school at Harvard University in Boston, MA*

Jason Peres da Silva, Brown University (2019-2022) **Attending medical school at Columbia University in New York, NY*

Astrid Ramos Colon, University of Puerto Rico (Summer student in 2020)

Randa Eldosougi, undergraduate, VT (2017-2019)

Kyle T. Rega, undergraduate, VT (2018-2019)

Ashley White, undergraduate, VT (2017-2019)

Tracey Myers, undergraduate, VT (2016-2019); **neuroSURF fellow * Attending graduate school at the University of Pittsburgh in Pittsburgh, PA*

Kayleigh Vance, undergraduate, VT (2016-2019); **neuroSURF fellow*

Dillon Shapiro, undergraduate, VT (2015-2018); **neuroSURF fellow; *Attending graduate school at Brown University**

Katie Pereira, undergraduate, VT (2016-2018); **neuroSURF fellow; *Research Assistant at Washington University in St. Louis, MO*

Daniel Quintana, undergraduate, Berkley (Summer of 2018); **neuroSURF fellow*

Jonathan Feaster, undergraduate, VT (2016-2019)

MacKenzie Miko, undergraduate, VT (2016-2019)

Shreyaska Dahal, undergraduate, VT (2015-2018t); **Attending medical school in the Caribbean*

Ryan Nasser, undergraduate, VT (2017); **neuroSURF fellow*

Leland L. Fleming, postbaccalaureate, VT (2015-2016); ** Currently a PhD student at UAB*

Michael Mykins, undergraduate, VT (2015-2019); **Attending graduate school at the University of Tennessee*

Graham Taylor – undergraduate, VT (2016-2017)

Natalia Sutherland – undergraduate, Emory and Henry College (2016-2017) ** Received Degree in Doctor of Medicine in 2022 from Virginia Tech in Roanoke, VA *Resident Physician at Massachusetts General Hospital in Boston, MA*

Tyler Celuck, undergraduate, VT (2015-2016); **Attending medical school at the University of West Virginia*

Caleb Wood, undergraduate, VT (2013-2016); **Attending graduate school at Baylor University*

David Martin – undergraduate, Hampton University (2016); **VTCSOM – Hampton University Guaranteed Admission Program Scholars for the summer*

Natalia Gutierrez – undergraduate, Northern Virginia Community College (2016); **VTCSOM – Hampton University Guaranteed Admission Program Scholars for the summer*

Jessica Stockinger – undergraduate, Roanoke College (2014-2016); **Attending medical school at Eastern Carolina Medical School*

Clare Burton – undergraduate, Elon College (2015-2016)

Sydney Vaughan – undergraduate, Roanoke College (2013-2015); ** ACC fellow, Fralin Summer Undergraduate Research Fellow; * Received PhD from Virginia Tech in 2019 * Clinical Trial Coordinator at Mayo Clinic in Jacksonville, FL.*

Lauren Kennedy – undergraduate, Roanoke College (2013-2015); **Attending graduate school, TBMH program at VT*

Kisha Gresham, undergraduate, VT (2013-2015); **Attending graduate school, TBMH program at VT*

Zachary Kemp, undergraduate, VT (2015)

Patrick Stewart – undergraduate, Elon College (2015)

Austin Tatum, Scieneer, undergraduate, VT (2015); **Fralin Summer Undergraduate Research Fellow*

Klaudia Jaczynska – undergraduate, Warsaw University, Poland (2015); **Summer scholar supported by the European Union*

Alyssa Huntington, undergraduate, VT (2014); **Scieneer fellow; * Currently a PhD student at VT*

Kaiwen Su – undergraduate, UVA (2013); **Currently a medical student at UVA*

High School students mentored

Iris Yang, high-school student, Rhode Island (2024-current)
Anabel Schiller, high-school student, Rhode Island (2022)
Virginia Owen Trinkle, high-school student, North Cross, Roanoke VA (2016-2019)
Shayom Debopadhaya, high-school student, Roanoke Valley Governor School (2017)
Olivia Stanley, high-school student, Roanoke Valley Governor School (2016)
Zachary Kemp, high-school student, Roanoke Valley Governor School (2014)

Thesis committees advising

Anthony Agudelo, PhD Student (Current). MCBGP, Brown University. Advisor: Dr. Nicola Neretti
Renjith Viswanathan, PhD Student (Current). TSGP, Brown University. Advisor: Dr. Nicolas Fawzi
Andrew Nunes, PhD Student (Current). MCBGP, Brown University. Advisor: Dr. Nicola Neretti
Alex Del Toro, PhD Student (Current). NSGP, Brown University. Advisor: Dr. Diane Hoffman-Kim
Jose F. Mercado Ortiz, PhD Student (Current). TSGP, Brown University. Advisor: Dr. Nicolas Fawzi
Victoria St. Amand, PhD Student (Current). MCBGP, Brown University. Advisor: Dr. Robert Reenan
Adele Finch, PhD Student (Current). NSGP, Brown University. Advisor: Dr. Ashley Webb
Chyna Gray Lowell, PhD Student (Graduated). MCBGP, Brown University. Advisor: Dr. Alfred Ayala
Rachana Deven Somaiya, PhD Student (2017-current). Translational Biology Medicine and Health Graduate Program, VT. Advisor: Dr. Michael Fox
Gabriela Carrillo, PhD Student (2017-current). Translational Biology Medicine and Health Graduate Program, VT. Advisor: Dr. Michael Fox
Alicia Kerr, PhD Student (2015-2019). Translational Biology Medicine and Health Graduate Program, VT. Advisor: Dr. Michael Fox
Chen Liang, PhD Student (2015-2018). Department of Biological Sciences, VT. Advisor: Dr. Konark Mukherjee
Aboozar Monavarfeshani, PhD Student (2013-2017). Department of Biological Sciences, VT. Advisor: Dr. Michael Fox
Nicole Smith, MS Student (2016-2018). Department of Biological Science, VT. Advisor: Dr. Iulina Lazar
Sung Seok Lee, PhD Student (2013-2016). Department of Population Health Sciences, VetMed, VT. Advisor: Dr. Andrea S. Bertke
Arbour Danielle, PhD Student (2011-2014). Department of Neuroscience. University of Montreal. Advisor: Dr. Richard Robitaille

Teaching Responsibilities

Brown University

2020 – Current	Biol 0500
2023 – Current	Biol 2150
2020 – 2023	Biol 2340
2020 – Current	Biol 2980
2020 – Current	Guest Lecturer in Biol 2350
2022	Guest Lecturer in Biol 2030

Virginia Tech

2014 – 2019	Current Instructor for Scientific Logic and Analysis, TBMH 5404
2014 – 2019	Guest Lecturer in the VT TBMH 5004 Gateway Course
2014 – 2019	Guest Lecturer in the VT TBMH 5014 Gateway Course
2014 – 2019	Guest Lecturer in the VT TBMH 5064 Gateway Course
2014 – 2019	Guest Lecturer in the VT TBMH 5105 Professional Development and Ethics
2013 –2019	Guest Lecturer in the VT HNFE 4844 Course

V. National/International recognition and Service

EDITORIAL BOARD

2013-current	Editorial Board for the Gerontology Journal: Biological Sciences
2021-Current	Editorial Board for Frontiers in Neuroanatomy

GRANT REVIEWER

2024	Health Resources in Action; Alzheimer's Disease, USA
2024	NIH Special Emphasis Panel, ZAG1 ZIJ-6 (J1) , USA
2020-present	Permanent member of AGCD-1 Study Section, USA
2018-2019	NIA-B Study Section, USA
2019	NIA RFA AG 20-014, USA
2019	NIA RFA AG 20-013, USA
2018	NIH ADRD-R03 Study Section, USA
2018	NIH NIA-B Study Section, USA
2018-2019	DoD, Amyotrophic Lateral Sclerosis, USA
2017	NIH SMEP Study Section, USA
2016-current	ARDRAF grants, USA
2016	National Science Center, Poland
2016	External reviewer for the Motor Neuron Disease Association (MND), UK
2016	Johns Hopkins University Claude D. Pepper Older Americans Independence Center, USA
2016	University of Michigan Nathan Shock Center of Excellence in Aging Research, Internal pilot grant, USA
2013	Aging Systems and Geriatrics Study Section, NIH, USA

PROFESSIONAL SOCIETIES

2016 - 2017	President for the Central Virginia Chapter of the Society for Neuroscience
2016 - 2019	Co-organizer and president for Muscle Group, VT
2012-2016	Council member for the Central Virginia Chapter for SfN

INVITED REVIEWER

eLife, Proceedings of the National Academy of Sciences USA, PLoS ONE, Frontiers in Neuroscience, Journal of Gerontology: Biological Sciences, Journal of Experimental Biology and Medicine, Scientific Reports, Acta Neuropathologica, Muscle and Nerve, Aging Cell, The Journal of Physiology, Frontiers in Physiology, International Journal of Molecular Sciences.

OTHER EXPERT SERVICES

2024	External reviewer for the Department of Biological Sciences at Lehman College, Bronx, NY.
2022	Consultant for Eikonizo Pharmaceuticals

INVITED PRESENTATIONS

Nov 2024	Valdez G. "Erosion of motor commands with aging: are synapses in muscles and
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	the spinal cord responsible?”. Center for Healthy Aging, Stony Brook University. Stony Brook, NY.
Nov 2024	Valdez G. “Loss of mobility with aging: are peripheral and spinal cord glia responsible?”. Department of Cell Biology, Emory University. Atlanta, Georgia
Sep 2024	Valdez G. “Let’s talk about synaptic Schwann cells”. Molecular and Cell Biology of the Neuromuscular System Meeting. Guarda, Switzerland.
July 2024	Valdez G. “Cellular and molecular changes that disrupt sensory and motor neuron communication”. Mechanotransduction, Muscle Spindles and Proprioception Symposium. Munich, Germany.
July 2024	Valdez G. “Mouse models of AD housed in 'dirty' conditions more closely resemble humans with the disease”. The Sixteenth International Symposium on Neurobiology and Neuroendocrinology of Aging. Bregenz, Austria.
Oct 2023	Valdez G. “The Neuromuscular Junction: New insights to protect it from aging and diseases”. Myology Institute, University of Florida, Florida.
Oct 2022	Valdez G. “Discovering the cellular and molecular drivers of spinal motor circuits degeneration during aging”. Join Seminars in Neuroscience Lecture series, Dept of UCLA. Los Angeles, California.
Sep 2022	Valdez G. “Vicious circle between glia and motor neurons underpins aging of NMJs and muscles”. Molecular and Cell Biology of the Neuromuscular System meeting. Guarda, Switzerland.
Sep 2022	Valdez G. “Aging of the neuromuscular junction and the capping Schwann cells”. Muscle Wasting meeting. Ascona, Switzerland.
July 2022	Valdez G. “Sensory neurons: innocent bystanders or contributors to motor neuron diseases”. Mechanotransduction, Muscle Spindles and Proprioception meeting. Munich, Germany.
March 2022	Valdez G. “A tripartite view of the NMJ aging: parsing out the contribution of motor neurons, muscle fibers and synaptic Schwann cells”. 2022 Padua Days on Muscle and Mobility Medicine meeting. Padua, Italy.
Nov 2021	Valdez G. “Multi-system cellular approaches to accelerate discoveries to slow aging and treat neurological diseases” Lehman College, NYC.
Dec 2020	Valdez G. “Generation of a rat model for EDMD lacking the emerin gene”. Special session on Bioengineering in Vitro Models of Disease at the American Society for Cell Biology (ASCB).
Sep 2020	Valdez G. “Shedding light on glial cells at motor neuron synapses”. Jackson Laboratory, Bar Harbor, Maine
Sep 2020	Valdez G. “Synaptic Glia: visualizing and targeting to decipher roles in the nervous system”. University of Puerto Rico, Rio Piedras Campus, Puerto Rico.
Dec 2019	Valdez G. “Synaptic loss: A consequence or driver of age-related pathologies” University of Rhode Island.
Dec 2019	Valdez G. “Synaptic degeneration: a byproduct or driver of ALS and age-related pathologies”. LifeSpan Hospital, Department of Neurology.
March 2019	Valdez G. “Synaptic aging: driver or byproduct of neural and muscle dysfunction?”. James Madison University, Virginia.
Sept 2018	Valdez G. “Maintaining healthy synapses”. VNPN meeting. University of Oslo, Norway.
April 2018	Valdez G. “Failure to communicate: The contribution of synapses and associated molecules to motor dysfunction”. Neural Engineering Symposium. The University of Miami, Miami, FL.
Dec 2017	Valdez G. “The synapse: initial site of age- and disease-related neuronal dysfunction”. Department of Neuroscience. Case Western University, Cleveland, OH.

Dec 2017	Valdez G. "The contribution of synapses to age- and disease-related motor deficits". Guest speaker at Wake Forest Annual Neuroscience Research Day.
Dec 2017	Valdez G. "Roles of microRNAs enriched in muscles and their synapses in stress responses." Department of Cell Biology and Molecular Medicine. Rutgers, The State University of New Jersey.
July 2017	Valdez G. "Slowing down: the effect of aging on the motor system." BioCoRE Symposium. Duke University, Durham, NC.
July 2017	Valdez G. "Impact of aging and ALS on motor and sensory synapses." Neuroscience Graduate Program. UVA, Charlottesville, VA.
Apr 2017	Valdez G. "Short Circuiting: Synaptic Degeneration Underlies Age-Related Motor Dysfunction." VCU School of Medicine, Richmond, VA.
Apr 2017	Valdez G. "Searching for factors that protect motor synapses from aging and ALS." Roanoke College, Roanoke, VA.
Jan 2017	Valdez G. "Short circuiting: synaptic degeneration underlies age-related motor dysfunction". Department of Neuroscience, University of Montreal. Montreal, Canada.
Oct 2016	Valdez G. "Age-related motor decline: pathological changes start at the synapse and end in the cell body." Baylor College of Medicine, Huffington Center on Aging, Houston, TX.
Oct 2016	Valdez G. "Career training and outcomes for PhD students; emphasis on mentoring of minority students, and career outcomes for PhDs." Society for Neuroscience annual meeting. San Diego, CA.
Oct 2016	Valdez G. "Despite the best intentions, glial cells promote synaptic degeneration in ALS and during normal aging." 5 th International Conference of Glial Biology in Medicine, Roanoke, VA.
Oct 2016	Valdez G. "Synaptic biomarkers: promise and perils for identifying and using them to optimize neuronal health." Virginia-Nordic Precision Neuroscience (VNPN) Conference at VTCRI, Roanoke, VA.
Oct 2016	Valdez G. "The Best Interview: How to Excel at the Graduate School Interview." Society for the Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS). Long Beach, CA.
Oct 2016	Valdez G. "Advice for the Advisors! Partnering with the Graduate Program Director to Successfully Prepare Your Students for the PhD." Society for the Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS). Long Beach, CA.
May 2016	Valdez G. "Communication gone awry: the contribution of synapses and associated molecules to skeletal muscle aging." University of Michigan, Department of Molecular and Integrative Physiology. Ann Arbor, Michigan.
Mar 2016	Valdez G. "Clock Plays a Key Role in the Timely Development and Repair of Neuromuscular Synapses." American Society for Neurochemistry annual conference. Denver, CO.
Dec 2015	Valdez G. "From the synapse to the cell body: Common mechanisms connecting aging and neurodegenerative diseases." VTLSS seminar series. Blacksburg, VA.
Oct 2015	Valdez G. "Get Ready For Your PhD!" Society for the Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS). Washington DC.
Oct 2015	Valdez G. "A Great Interview." Society for the Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS). Washington DC.
Jun 2015	Valdez G. "Relationship between NMJ and myogenic changes." Rusch University Medical Center. Chigago, IL.
May 2014	Valdez G. "Staying connected: molecules utilized by muscles and motor neurons to maintain adult NMJs." Montreal Muscle Group meeting, McGill University. Montreal, Canada.

Jan 2014	Valdez G. "The role of synaptic molecules in motor neuron and muscle diseases." International Conference on Frailty and Sarcopenia Research (ICFSR2014). Barcelona, Spain.
Jan 2014	Valdez G. "Cellular and molecular changes associated with aging neuromuscular synapses." American Society for Neurochemistry, Long Beach, CA.
Dec 2014	Valdez G. "Discovering molecules that protect synapses from the ravages of aging." Virginia local SFN chapter meeting in Richmond, VA.
Oct 2014	Valdez G. "The odyssey of secreted synaptic molecules: the many challenges secreted molecules encounter on their path to affect change." Insane about Membrane Traffic MAC session for the SACNAS conference. Los Angeles, CA.
Nov 2013	Valdez G. "Lifestyle and molecular factors that maintain and repair peripheral synapses." Georgia Regents University, Georgia.
Aug 2013	Valdez G. "Combating neurological diseases and aging by targeting synapses." Department of Statistics, Virginia Tech.
Aug 2013	Valdez G. "The role of synaptic molecules in diseases of the nerve and muscle." UFMG, Brazil,
July 2013	Valdez G. "Influence of peripheral connections on the initiation and progression of ALS." Brazilian Society for Neuroscience, Brazil.
Nov 2013	Valdez G. "Structural and Molecular Neuromuscular Changes Induced by Aging and Age-related Diseases NIA Workshop: Age-related Changes in Neuromuscular Junction." Bethesda, DC
Nov 2013	Valdez, G. "Molecular mechanisms that maintain and repair neuromuscular junctions." Children's National Medical Center. Washington DC.
Oct 2013	Valdez G. "The role of synaptic molecules in motor neuron and muscle diseases." Virginia Tech/Dept. of HNFE, Blacksburg VA.
Mar 2013	Valdez G. "How brains grow and age." Brain School at VTCRI, Roanoke, VA.
Feb 2013	Valdez G. "Brain Power: The role of exercise and diet in maintaining healthy synapses." Jefferson College of Health Sciences. Roanoke, VA.
Dec 2013	Valdez G. "Using sensory neurons to screen for therapeutics for ALS." Virginia Tech/Center for Drug Discovery, Blacksburg, VA.
Sept 2012	Valdez G. "Evidence from Animal Models: Effects of Aging and Lifestyle Factors on Motor Synapses." GSA meeting 2012; the Central Nervous System, and Mobility in Older Adults workshop, Evidence on Changes in the Central Nervous System, Control of Movement Across the Lifespan and in Aging. San Diego, CA.
Jun 2010	Valdez G. "Protecting neuromuscular synapses from the ravages of aging and Lou Gehrig's disease." Neurolunch, Harvard University. Cambridge, MA.
Apr 2010	Valdez G. "Molecular and structural changes in aging and ALS-afflicted neuromuscular junctions." Harvard NeuroDiscovery Center Journal Club, Massachusetts General Hospital. Boston, MA.
Sept 2010	Valdez G. "Attenuation of age-related changes in mouse neuromuscular synapses by caloric restriction and exercise." Keystone Symposia. Tahoe City, CA.
Jun 2008	Valdez G. "Regulation of Neuromuscular Synaptic Maturation and Reinnervation by microRNA-206." Society for Neuroscience.
Jun 2005	Valdez G. "Pincher-mediated macroendocytosis underlies retrograde signaling by neurotrophin receptors." Herbert H. Lehman College, Bronx, NY.
Apr 2004	Valdez G. "Pincher mediates formation and trafficking of Trk signaling endosomes in neurons." Neuroscience meeting, New Orleans, 2004.
Mar 2003	Valdez G. "A novel endocytic mechanisms regulates neurotrophin endocytosis and signaling." Graduate presentation, Stony Brook University.
Nov 1996	Valdez G. "Variation in the accumulation of carotenoids in E. coli strains." Maize Genetics Conference, Chicago, Illinois, 1996.

Nov 1993 Valdez G. “Localization of bacterial phytoene desaturase homologs in plants.” National Institute of General Medical Sciences Minority Programs Symposium, Atlanta, Georgia.

SERVICE

Committees

Brown University

- Search Committee for Biology on Aging faculty search
- Search Committee for Carney Institute search for Director of Alzheimer’s Center
- ARC Program Steering Committee
- MCBGP admissions committee
- NSGP admissions committee
- NSGP advisory committee
- MCBGP advisory committee
- COVID facilities committee
- Executive Committee for Translational Neuroscience Center
- Carney Microscopy Committee
- MCB Dept. Space Committee

Virginia Tech

- Health Science and Technology translation and commercialization leadership team, Virginia Tech, Roanoke Campus (2018 – Present)
- Executive committee for Department of Biological Sciences (2018 – 2019)
- Executive committee for Department of Biological Sciences (2016 – 2017)
- Brain Health and Disease Building Planning Group for Health Science Center in Roanoke (2016-2017)
- Faculty Search committees for various VTCRI hiring initiatives (2012-2017)
- Adult Development and Aging for Center for Gerontology (2016-2017)
- School of Neuroscience (2016-2017), Glial Center at VTCRI (2015-2017)
- Development committee for Brain Science track of TBMH Graduate program (2013-2019)
- Development committee for Development, Aging and Repair track of TBMH Graduate program (2013-2019)
- VTCRI selection committee for Distinguished Lecture Series (2013-2014)
- Translational Biology, Medicine, and Health (TBMH) Graduate Program Development Committee (2013-2014)
- Representative for VTC School of Medicine during LCME (Liaison Committee for Medical Education) accreditation visit (2015)

Service to the Community

2013 – Current	Frequent panelist in workshops for Minorities in Science.
2023	Panelist for World Alzheimer’s Day, Rhode Island
2017	Speaker at the ALS association DC/MD/VA chapter for individuals with the disease and their families, Roanoke.
2013-2017	Virginia Science Festival Exhibit, “Untangling the wires of your brain!” (VTCRI, in conjunction with the Science Museum of Western Virginia)
2015	Speaker at the ALS association DC/MD/VA chapter for individuals with the disease and their families, Roanoke.
2013	VTCRI Brain School Public lecture “How brains grow and age!”

Session/Conference Chair positions

July 2022	Session Chair at the Gerontological Society of America meeting in Tampa, FL.
Sept 2018	Planning committee for Virginia Nordic Precision Neuroscience Conference from Sept 19-21 st of 2018 at the University of Oslo, Norway.
March 2017	“Neurodegenerative diseases: from basic science to therapeutic interventions” Central Virginia Chapter of the Society for Neuroscience Annual Symposia <i>Speaker list: Kenneth S. Kosik, Maul G. Tansey, John Bethea, Rory McQuiston, Linda Boland, Michael Fox, Michael McConnell, Scott Zeitlin, Michelle Olsen, William Buchser</i>
March 2016	America Society for Neurochemistry: Chaired Symposia “Oral Session.” Denver, CO. <i>5 speakers were selected from abstract submissions</i>
March 2016	America Society for Neurochemistry: Chaired Symposia “Keeping Time: Roles of circadian genes in the formation of and repair of neural circuits.” Denver, CO. <i>Speaker list: Judy Liu, Erick Musik, F. Rob Jackson</i>
March 2016	Co-founded and Organized first Muscle Symposia at VT with Dr. Robert Grange: <i>Speaker list: Russell Hepple (McGill University), and lab heads from VT with research interest on muscle biology</i>

VI. ECONOMIC CONTRIBUTIONS AND ENTREPRENEURSHIP

Start-up Business

- C9/3D Therapeutics, Virginia Tech, C9/3D Therapeutics - startup biotech company

Patents

- Combinatorial use of markers to isolate synaptic glia to generate synapses in a dish for high throughput and high-content drug discovery and testing; ip information: 2021-11-11 us20210349078a1; published.
- A novel use of clopidogrel/Plavix to treat Amyotrophic Lateral Sclerosis, damages caused by the normal aging process, nerve injuries, muscular dystrophy, strenuous physical activities and other conditions that affect synapses as well as skeletal muscles. US Provisional Patent. Attorney Docket No.: 405505-754P01US/

Updated: 01/09/2025