JOANNA L. JANKOWSKY, PH.D.

VIVIAN L. SMITH ENDOWED PROFESSOR OF NEUROSCIENCE
ASSOCIATE DIRECTOR, GRADUATE PROGRAM IN NEUROSCIENCE
BAYLOR COLLEGE OF MEDICINE

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EDUCATION AND POSTGRADUATE TRAINING

1987-1991 *B.A., Biology*
Amherst College

1993-1999 *Ph.D., Cellular and Molecular Neuroscience*
California Institute of Technology
Thesis Supervisor: Dr. Paul Patterson

2000-2001 *Postdoctoral Fellow*
Division of Neuropathology, Johns Hopkins University School of Medicine
Postdoctoral Advisor: Dr. David Borchelt

2001-2003 *Research Associate*
Division of Neuropathology, Johns Hopkins University School of Medicine
Laboratory Head: Dr. David Borchelt

2003-2008 *Senior Research Fellow*
Division of Biology, California Institute of Technology
Laboratory Head: Dr. Henry Lester

ACADEMIC APPOINTMENTS

Current appointments

2019- *Vivian L. Smith Endowed Chair in Neuroscience*
Professor, Department of Neuroscience (primary)
Departments of Molecular and Cellular Biology, Neurosurgery, and Neurology (secondary)
Huffington Center on Aging (secondary)
Baylor College of Medicine

2016- *Associate Director*, Graduate Program in Neuroscience, Baylor College of Medicine

Past appointments

2008-2015 *Assistant Professor*, Department of Neuroscience (primary)
Departments of Molecular and Cellular Biology, Neurosurgery, and Neurology (secondary)
Huffington Center on Aging (secondary)
Baylor College of Medicine

2015-2019 *Associate Professor*, Department of Neuroscience (primary)
Departments of Molecular and Cellular Biology, Neurosurgery, and Neurology (secondary)
Huffington Center on Aging (secondary)
Baylor College of Medicine

HONORS AND AWARDS

2001-2003 John Douglas French Alzheimer's Foundation Fellow

2004-2006 NARSAD Young Investigator Award

2004-2009 NIH Mentored Research Scientist Award (K01)

2007-2012 NIH Director's New Innovator Award (DP2)

2009 Invited speaker, Japan-America Frontiers of Engineering Symposium, National Academy of Engineering, Irvine, CA

2019 BCM Clark Faculty Service Award

2019-2022 Alzheimer's Association Zenith Fellows Award

2020 Vivian L. Smith Endowed Chair in Neuroscience

2021 Takeda Award, MGH Virtual Symposium: Innovative Molecular, Physiological and Therapeutic Approaches to Neurodegenerative Disease

RESEARCH FUNDING

Current Support

2020-2024 Texas Alzheimer's Research and Care Consortium, 2020-02-11-II
"Gene therapy for Alzheimer's disease using virally delivered Aβ variants"
Total direct cost: $360,000

2021-2024 HHMI James H. Gilliam, Jr. Fellowship for Advanced Study, GT13620
Training fellowship for graduate student Gabriella Perez
Total direct cost: $150,000

2021-2024 NIH RF1 AG069721-01A1, 01A1S1
"Gene therapy for Alzheimer's disease using virally delivered Aβ variants"
Total direct cost: $1,125,747
Diversity supplement, total direct cost: $151,340

2021-2026 NIH P01 AG066606-01A1, 01A1S1 (Hui Zheng, contact PI; Jankowsky, Project 3 Lead)
Overall: "Lysosome regulation and signaling in aging and Alzheimer's disease"
Project 3: "TMEM106B as a lysosomal adaptor to influence brain aging and tau pathogenesis"
Total direct cost for Project 3: $1,678,600
Diversity supplement, total direct cost: $76,520

2021-2026 NIH R01 AG074009 (MPI with Olivier Lichtarge and Ismael Al-Ramahi)
"Decoding the impact of sex differences on Alzheimer's disease risk"
Total direct cost: $3,750,000 (salary support only)

2024-2029 NIH R01 AG085751
"Causes and consequences of differential APP processing in inhibitory and excitatory neurons"
Total direct cost: $2,080,630

Pending

2024-2026 NIH RF1 AG069721-01A1
"Gene therapy for Alzheimer's disease using virally delivered Aβ variants"
Total direct cost: $782,930

Past Support

2019-2023 Alzheimer's Association Zenith Fellows Award
"TMEM106B as a lysosomal safeguard of cognitive function"
Total direct cost: $409,092

2017-2022 NIH RF1 AG058188, 01S1, 01S2
"Plasticity of the entorhinal-hippocampal circuit as a vulnerability in AD"
Total direct cost: $1,784,175
Diversity supplement, total direct cost: $106,710
Equipment supplement, total direct cost: $214,132

2020-2022 BCM/HMH Collaborative Pilot Grant in Alzheimer's Disease and Related Dementias
"Capturing the yin and yang of neuroinflammation through novel PET ligands"
Total direct cost: $40,000

2017-2021 NIH R21 AG056028
"Modeling genetic modifiers of cognitive reserve in AD"
Total direct cost: $275,000

2016-2021 NIH RF1 AG054160
"Interrogating the link between aging and AD with temporally-controlled transgenes"
Total direct cost: $1,601,766

2015-2020 NIH R01 NS092615
"Deconstructing the pathogenic effect of APP in memory circuits"
Total direct cost: $1,197,960

2015-2016 Gillson Longenbaugh Foundation
"In search of the holy grail: can innate plasticity support functional recovery after cortical degeneration?"
Total direct cost: $40,000

2015-2016 BCM Memory and Brain Research Center Pilot Award (Co-PI with Russell Ray)
"Modeling sleep disordered breathing in the onset and progression of Alzheimer's disease"
Total direct cost: $50,000

2013-2017 NIH R21 MH101583
"Selective neuronal silencing to study hippocampal neurogenesis in depression"
Total direct cost: $275,000

2012-2017 Robert A. and Renee E. Belfer Family Foundation (co-I; Huda Zoghbi, PI)
"An integrated approach to identify novel therapeutic targets for Alzheimer's disease by exploiting unifying features of neurodegeneration"
Total direct cost: $1,350,000

2010-2014 American Health Assistance Foundation (now BrightFocus Foundation)
Standard Award A2010097
"Separating the cell-autonomous from –extrinsic effects of APP/Aβ"
Total direct costs: $396,504

2010-2013 NIH R21 AG38856
"Separating the cell-autonomous from –extrinsic effects of APP/Aβ"
Total direct costs: $220,728

2010-2011 BCM Alzheimer's Disease and Memory Disorders Center Pilot Grant
"The impact of amyloid pathology on hippocampal place cell function in transgenic mice"
Total direct cost: $84,430

2010-2012 NIH DP2 OD001734-S1
Research Supplement to Promote Diversity in Health-Related Research
Total direct cost: $83,480

2007-2012 NIH DP2 OD001734
"Selective neuronal silencing to study cognitive decline in Alzheimer's disease"
Total direct cost: $1,500,000

2006-2008 Alzheimer's Association New Investigator Research Grant 06-25282
"Combination therapy for the treatment of Alzheimer's disease: proof-of-concept in a transgenic mouse model"
Total direct cost: $90,000

2005-2006 Caltech Brain Imaging Center Discovery Award, co-PI with Russell Jacobs
"Live imaging of amyloid plaque formation and clearance in transgenic mice using μMRI"
Total direct cost: $60,000

2004-2010 NIH K01 AG26144
"Interaction of Aβ and the α7 AChR in a mouse model of AD"

Total direct cost: $576,250

2004-2006 National Alliance for Research on Schizophrenia and Depression (NARSAD) Young Investigator Award
"The role of the α7 acetylcholine receptor in a mouse model of Alzheimer's disease"
Total direct cost: $60,000

2001-2003 American Health Assistance Foundation (now BrightFocus Foundation) Pilot Research Grant
"Environmental enrichment of APP transgenic mice"
Total direct cost: $100,000

2001-2003 The John Douglas French Alzheimer's Foundation Postdoctoral Fellow
"Environmental enrichment of APP transgenic mice"
Total direct cost: $70,000

2001-2002 Johns Hopkins School of Medicine Alzheimer's Disease Research Center
"Tetracycline-controlled expression of presenilin-1 and APP in transgenic mice"
Total direct cost: $20,000

PUBLICATIONS

1. **Jankowsky, J.L**., and Patterson, P.H., Differential regulation of cytokine expression following pilocarpine-induced seizure, *Exp. Neurol*. 159: 333-346 (1999).

2. **Jankowsky, J.L**., and Patterson, P.H., Cytokine and growth factor involvement in long-term potentiation, *Mol. Cell. Neurosci*., 14:529-543 [review] (2000).

3. **Jankowsky, J.L**., Derrick, B.E., and Patterson, P.H., Cytokine responses to LTP induction in the rat hippocampus: a comparison of in vitro and in vivo techniques, *Learn. & Mem*. 7: 400-412 (2000).

4. **Jankowsky, J.L**., and Patterson, P.H., The role of cytokines and growth factors in seizure and its sequelae, *Prog. Neurobiol*. 63: 125-149 [review] (2001).

5. Lesuisse, C. Xu, G., Anderson, J., Wong, M., **Jankowsky, J**., Holtz, G., Gonzalez, V., Wong, P.C.Y., Price, D.L., Tang, F., Wagner, S., and Borchelt, D.R., Hyper-expression of human apolipoprotein E4 in astroglia and neurons does not enhance amyloid deposition in transgenic mice, *Hum. Mol. Genet*. 10: 2525-2537 (2001).

6. **Jankowsky, J.L**., Slunt, H.H., Ratovitski, T., Jenkins, N.A., Copeland, N.G., and Borchelt, D.R., Coexpression of multiple transgenes in the mouse CNS: a comparison of strategies. *Biomol. Eng*. 17: 157-165 (2001).

7. **Jankowsky, J.L**., Savonenko, A., Schilling, G., Wang, J., Xu, G., and Borchelt, D.R., Transgenic mouse models of neurodegenerative disease: Opportunities for therapeutic development. *Curr. Neurol. Neurosci. Repts.* 2: 457-464 [review] (2002).

8. **Jankowsky, J.L.**, Xu, G., Gonzales, V., Fromholt, D., and Borchelt, D.R., Environmental enrichment exacerbates amyloid plaque formation in a transgenic mouse model of Alzheimer's disease. *J. Neuropathol. Exp. Neurol*. 62:1220-1227 (2003).

9. **Jankowsky J.L**., Fadale, D.J., Anderson, J., Xu, G., Gonzales, V., Jenkins, N.A., Copeland, N.G., Lee, M.K., Younkin, L.H., Wagner, S.L., Younkin, S.G., and Borchelt, D.R., Mutant presenilins specifically elevate the levels of the 42-residue β-amyloid peptide *in vivo*: evidence for augmentation of a 42-specific γ-secretase. *Hum. Mol Genet*. 13:159-170 (2004).

10. **Jankowsky, J.L**., Slunt, H.H., Gonzales, V., Jenkins, N.A., Copeland, N.G., and Borchelt, D.R., APP processing and amyloid deposition in mice haplo-insufficient for presenilin 1. *Neurobiol. Aging* 25:885-892 (2004).

11. **Jankowsky J.L**., Melnikova T., Fadale, D.J., Xu, G.M., Slunt, H.H., Gonzales, V., Younkin, L.H., Younkin, S.G., Borchelt, D.R., and Savonenko, A.V., Environmental enrichment mitigates cognitive deficits in a mouse model of Alzheimer's disease, *J. Neurosci*. 25:5217-5224 (2005)

12. **Jankowsky J.L**., Slunt, H.H., Gonzales, V., Savonenko, A.V., Wen, J., Jenkins, N.A., Copeland, N.G., Younkin, L.H., Lester, H.A., Younkin, S.G., and Borchelt, D.R., Persistent amyloidosis following suppression of Aβ production in a transgenic model of Alzheimer's disease. *PLoS Medicine* 2:e355 (2005).

13. Verret L.*, **Jankowsky J.L**.*, Xu G., Borchelt D.R., and Rampon C., Alzheimer's-type amyloidosis in mice impairs survival of newborn neurons derived from adult hippocampal neurogenesis. *J. Neurosci*. 27:6771-6780 (2007). *These authors contributed equally to this work

14. **Jankowsky J.L.**, Younkin L.H., Gonzales V., Fadale D.J., Slunt H.H., Lester H.A., Younkin S.G., and Borchelt D.R., Rodent Aβ modulates the solubility and distribution of amyloid deposits in transgenic mice *J. Biol. Chem*. 282:22707-22720 (2007).

15. Moss, F.J., Imoukhuede, P.I., Scott, K., Hu, J., **Jankowsky, J.L**., Quick, M.W., and Lester, H.A., GABA transporter function, oligomerization state and anchoring: correlates with subcellularly resolved FRET, *J. Gen. Physiol*. 134:489-521 (2009).

16. Badea, A., Johnson, G.A., and **Jankowsky, J.L.**, Automated volumetric MR analyses identify remote sites of structural atrophy prior to amyloid formation in a mouse model of Alzheimer's disease. *NeuroImage* 50:416-427 (2009).

17. Wang, A., Das, P., Switzer, R.C., Golde, T.E. and **Jankowsky J.L.**, Robust amyloid clearance in a mouse model of AD provides novel insights into the mechanism of Aβ immunotherapy. *J Neurosci.* 31:4124-4136 (2011).

18. Cowin, R.-M., Roscic, A., Bui, N., Graham, D., Paganetti, P., **Jankowsky, J.L.**, Weiss, A., and Paylor, R., Neuronal aggregates are associated with phenotypic onset in the R6/2 Huntington's disease transgenic mouse, *Behav. Brain Res*. 229:308-319 (2012)

19. Rodgers, S.P., Born, H.A., Das, P, and **Jankowsky, J.L.**, Transgenic APP expression during postnatal development causes persistent motor hyperactivity in the adult, *Molec. Neurodegen*. 7:28 (2012)

20. Han, H.J., Allen, C.A., Buchovecky, C.M., Yetman, M.J., Born, H.A., Marin, M.A. Rodgers, S.P., Song, B.J., Lu, H.-C., Probst, F.J., and **Jankowsky, J.L.**, Strain background influences neurotoxicity and behavioral abnormalities in mice expressing the tetracycline transactivator. *J Neurosci*. 32:10574-10586 (2012)

21. Kim, J.-Y., Ash, R., Levites, Y., Caballos-Diaz, C., Golde, T.E., Smirnakis, S.M., and **Jankowsky, J.L.**, Viral transduction of the neonatal brain delivers controllable genetic mosaicism for visualizing and manipulating neuronal circuits in vivo, *Eur J. Neurosci.* 37:1203-1220 (2013).

22. Chakrabarty, P., Rosario, A., Cruz, P., Siemienski, Z., Ceballos-Diaz, C., Crosby, K., Jansen, K., Borchelt, D.R., Kim, J.-Y., **Jankowsky, J.L.**, Golde, T.E., and Levites, Y., Capsid serotype and timing of injection determines AAV transduction in the neonatal mouse brain, *PLoS ONE* 8:e67680 (2013).

23. Yetman, M.J., and **Jankowsky, J.L.**, Wild-type neural progenitors divide and differentiate normally in an amyloid-rich environment, *J. Neurosci.* 33:17335-17341 (2013).

24. Sun, M-Y., Yetman, M.J., Lee, T-C., Chen, Y., and **Jankowsky, J.L.**, Specificity and efficiency of reporter expression in adult neural progenitors vary substantially among nestin-CreER^{T2} lines, *J. Comp. Neurol.* 522:1191-1208 (2014).

25. Born, H.A., Kim, J.-Y., Das, P., Dabaghian, Y., Guo, Q., Yoo, J.W., Schuler, D.R., Cirrito, J.R., Zheng, H., Golde, T.E., Noebels, J.L., and **Jankowsky, J.L**., Genetic suppression of transgenic APP rescues hyper-synchronous network activity in a mouse model of Alzheimer's disease, *J. Neurosci*. 34:3826-3840 (2014).

26. Fowler, S.W.*, Chiang, A. C-A.*, Savjani, R.R., Larson, M.E., Schuler, D.R., Cirrito, J.R., Lesne, S., and **Jankowsky, J.L.**, Genetic modulation of soluble Aβ rescues cognitive and synaptic impairment in a mouse model of Alzheimer's disease, *J. Neurosci*. 34:7871-7885 (2014)

27. Zhao, R., Fowler, S.W., Chiang, A.C-A., Ji, D.*, and **Jankowsky, J.L.***, Impaired refinement of hippocampal place cells during maze habituation limits spatial learning in a mouse model of Alzheimer's disease, *Hippocampus* 24:963-78 (2014). *These authors contributed equally to this work

28. Kim, J.-Y.*, Grunke, S.D.*, Levites, Y., Golde, T.E., and **Jankowsky, J.L.,** Intracerebroventricular viral injection of the neonatal mouse brain for persistent and widespread neuronal transduction, *JoVE*, 91: e51863, doi:10.3791/51863 (2014).

29. Tanifum, E.A., Starosolski, Z.A., Ghaghada, K., Fowler, S.W., **Jankowsky, J.L.**, and Annapragada, A.V., Computed tomography for detection of vascular leak in a mouse model of amyloid neuropathology, *J. Cereb. Blood Flow Metab*. 34:1646-1654 (2014).

30. Lian, H., Yang, L., Cole, A., Sun, L., Chiang, A.C-A., Fowler, S.W., Shim, D.J., Rodriguez-Rivera, J., Taglialatela, G., **Jankowsky, J.L.**, Lu, H-C., and Zheng, H., NFκB-activated astroglial release of complement C3 compromises neuronal morphology and function associated with Alzheimer's disease, *Neuron* 85:1-15 (2015).

31. Wang, J., Wegener, J.E., Huang, T.-W., Sripathy, S., Jesus-Cortes, H.D., Xu, P., Tran, S., Knobbe, W., Britt, J., Starwalt, R., McDaniel, L., Ward, C., Parra, D., Newcomb, B., Lao, U., Leko, V., Flowers, D., Cullen, S., Yetman, M., Jorstad, N., Yang, Y., Glaskova, L., Vigneau, S., Kozlitina, J., Reichardt, S.D., Reichardt, H.M., Gartner, J., Bartolomei, M.S., Fang, M., Loeb, K., Keene, C.D., Bernstein, I., **Jankowsky,**

J., Goodell, M., Brat, D.J., Huppke, P., Neul, J.L., Bedalov, A., and Pieper, A.A., Wild type microglia do not arrest pathology in mouse models of Rett syndrome, *Nature* 521:E1-4 (2015).

32. Liu, P., Reed, M.N., Kotilinek, L.A., Grant, M.K.O., Forster, C.L., Qiang, W., Shapiro, S.L., Reichl, J.H., Chiang, A.C.A., **Jankowsky, J.L.**, Wilmot, C.M., Cleary, J.P., Zahs, K.R., and Ashe, K.H., Quaternary structure defines a large class of amyloid-β oligomers neutralized by sequestration, *Cell Repts*. 11:1760-1771 (2015).

33. Lian, H. Litvinchuk, A., Chiang, A.C.-A., Aithmitti, N., **Jankowsky, J.L.**, and Zheng, H., Astrocyte-microglia crosstalk through complement activation modulates amyloid pathology in mouse models of Alzheimer's disease, *J. Neurosci*. 36:577-589 (2016).

34. Kim, J.-Y.*, Grunke, S.D.*, and **Jankowsky, J.L**., Widespread neuronal transduction of the rodent CNS via intraventricular viral injection of the neonate, *Methods Mol. Biol.* 1382:239-250 (2016).

35. Yetman, M.J., Lillehaug, S., Bjaalie, J.G., Leergaard, T.B., and **Jankowsky, J.L.**, Transgene expression in the neuropsin-tTA driver line is not inherently restricted to the entorhinal cortex, *Brain Struct. Funct.* 221:2231-2249 (2016).

36. Yetman, M.J., Fowler, S.W., and **Jankowsky, J.L.**, Humanized tau mice with regionalized amyloid exhibit behavioral deficits but no pathological interaction, *PLoS ONE* 11: e0153724 (2016).

37. Marin, M.A., Ziburkus, J., **Jankowsky, J.L.**, and Rasband, M.N., Amyloid-β plaques disrupt axon initial segments, *Exp. Neurol*. 281:93-98 (2016).

38. Zhao, R., Grunke, S.D., Keralapurath, M.M., Yetman, M.J., Lam, A., Lee, T.C., Sousounis, K., Jiang, Y., Swing, D.A., Tessarollo, L., Ji, D., and **Jankowsky, J.L.**, Impaired recall of positional memory following chemogenetic disruption of place field stability, *Cell Repts*. 16:1-12 (2016).

39. Kim, J-Y., Jang, A., Reddy, R., Yoon, W.H., **Jankowsky, J.L.**, Neuronal overexpression of human VAPB slows motor impairment and neuromuscular denervation in a mouse model of ALS, *Hum. Mol. Genet*. 25:4661-4673 (2016).

40. Verbeeck, C.*, Carrano, A.*, Chakrabarty, P., **Jankowsky, J.L.**, and Das, P., Combination of Aβ suppression and innate immune activation in the brain significantly attenuates amyloid plaque deposition, *Am. J. Pathol*. 187:2886-2894 (2017).

41. **Jankowsky, J.L.** and Zheng, H., Practical considerations for choosing a mouse model of Alzheimer's disease, *Mol. Neurodegen*. 12:89 [invited review] (2017).

42. Chiang, A.C-A.*, Fowler, S.W.*, Reddy, R., Pletnikova, O., Troncoso, J.C., Sherman, M.A., Lesne, S., and **Jankowsky, J.L.**, Discrete pools of oligomeric amyloid-β track with spatial learning deficits in a mouse model of Alzheimer's amyloidosis, *Am. J. Pathol*. 188:739-756 (2018).

43. Chiang, A.C-A., Fowler, S.W., Savjani, R.R., Hilsenbeck, S.G., Wallace, C.E., Cirrito, J.R., Das, P. and **Jankowsky, J.L.**, Combination anti-Aβ treatment maximizes cognitive recovery and rebalances mTOR signaling in APP mice, *J. Exp. Med.* 215:1349-1364 (2018).

44. Lillehaug, S., Yetman, M.J., Puchades, M.A., Checinska, M.M, Kleven, H., **Jankowsky, J.L.**, Bjaalie, J.G., and Leergaard, T.B., Brain-wide distribution of reporter expression in five transgenic tetracycline-transactivator mouse lines, *Sci. Data* 6:190028 (2019).

45. Huichalaf, C.H., Al-Ramahi, I.*, Park, K.W.*, Grunke, S.D., Lu, N., de Haro, M., El-Zein, K., Gallego-Flores, T., Perez, A.M., Jung, S.Y., Botas, J., Zoghbi, H.Y., and **Jankowsky, J.L.**, Cross-species genetic screens identify kinase targets for APP reduction in Alzheimer's disease, *Hum. Mol Genet.* 28:2014-2029 (2019)

46. Roy, R.R., Wang, B., Wan, Y.-W., Chiu, G., Cole, A., Yin, Z., Propson, N.E., **Jankowsky, J.L.**, Liu, Z., Lee, V.M.Y, Trojanowski, J., Ginsberg, S.D., Butovsky, O., Zheng, H., and Cao, W., Type I interferon drives neuroinflammation and synapse loss in Alzheimer's disease, *J. Clin. Invest.* 130:1912-1930 (2020).

47. Park, K.-W., Wood, C.A., Li, J., Taylor, B.C., Oh, S.-W., Young, N.L, and **Jankowsky, J.L.**, Gene therapy using Aβ variants for amyloid reduction, *Mol. Ther*. 29:2294-2307 (2021).

48. Koller, E.J., Comstock, M., Bean, J.C., Escobedo, G., Park, K.-W., **Jankowsky, J.L.**, Temporal and spatially-controlled APP transgene expression using Cre-dependent alleles, *Dis. Model. Mech*. 15: dmm049330 (2022).

49. Zhao, R.*, Grunke, S.D.*, Wood, C.A.*, Perez, G.A., Comstock, M., Li, M.-H., Singh, A.K., Park, K.-W., **Jankowsky, J.L.**, Activity disruption causes degeneration of entorhinal neurons in a mouse model of Alzheimer's circuit dysfunction, *eLife* 11:e83813 (2022).

50. Zhang, T., Pang, W., Feng, T., Guo, J., Wu, K., Nunez Santos, M., Arthanarisami, A., Nana, A.L., Nguyen, Q., Kim, P.J., **Jankowsky, J.L.**, Seeley, W.L., Hu, F., TMEM106B regulates microglial proliferation and survival in response to demyelination *Sci Adv*. 9:eadd2676 (2023).

51. Lusk, S., Ward, C.S., Chang, A., Twitchell-Heyne, A., Fattig, S., Allen, G., **Jankowsky, J.**, and Ray, R., An automated respiratory data pipeline for waveform characteristic analysis, *J. Physiol*. 601:4767-4806 (2023).

52. Nguyen, Q., Wood, C.A., Kim, P.J., and **Jankowsky, J.L.**, TMEM106B T186S coding variant increases neurite arborization and synaptic density in primary neurons, *Front. Neurosci*. 17:10.3389/fnins/2023/1275959 (2023)

53. Perez, G.A., Park, K.-W., Lanza, D., Cicardo, J., Uddin, M.D., and **Jankowsky, J.L.**, Generation of a DCX-CreER^{T2} knock-in mouse for genetic manipulation of newborn neurons, *genesis* 16:e23584 (2023).

54. Koller, E.J., Wood, C.A., Lai, Z., Borgenheimer, E., Hoffman, K.L., and **Jankowsky, J.L.**, Doxycycline for transgene control diminishes gut microbiome diversity without compromising neuroinflammatory response, *J. Neuroinflamm*. 21:10.1186/s12974-023-03004-4 (2024).

55. Edwards, G.A. III, Wood, C.A., He, Y., Nguyen, Q., Kim, P.J., Gomez-Gutierrez, R., Park, K.-W., Xu, Y., Zurhellen, C., Al-Ramahi, I., and **Jankowsky, J.L.**, TMEM106B coding variant is protective and deletion detrimental in a mouse model of tauopathy. *Acta Neuropathol*. 147:61 10.1007/s00401-024-02701-5 (2024)

56. Wood, C.A., Somasundaram, P., Rudy, M., Wan, Y.W., Watkins, T., and **Jankowsky, J.L.**, Chemogenetic neuronal silencing decouples c-Jun activation and cell death in the temporal cortex (submitted)

57. Borgenheimer, E., Trueblood, C., and **Jankowsky, J.L.**, An optimized vector for viral delivery of aggregation-slowing Aβ variants (submitted).

PATENT

Park, K.-W. and **Jankowsky, J.L.**, *Delivery of Aβ variants for aggregation inhibition*, PCT International Patent Application Serial No. PCT/US2021/072944, filed December 15, 2021

PROFESSIONAL SERVICE

NATIONAL / INTERNATIONAL

Editorial boards

2014-2017 Editorial Board, Scientific Reports

Manuscript referee

In the past 3 years I have reviewed manuscripts for Alzheimer's Research and Therapy, Cells, Journal of Alzheimer's Disease, Journal of Alzheimer's Disease Reports, Journal of Neuroscience, Mammalian Genome, Molecular Neurodegeneration, Molecular Therapy Methods and Clinical Development, Neurobiology of Aging, and Science Advances.

International review panels

2007-present	Alzheimer's Association grant review
2008-2015	Medical Research Scotland, Edinburgh, Scotland; Health Research Board, Dublin, Ireland; Ontario Mental Health Foundation, Canada; Atlantic Canada Opportunities Agency, Atlantic Innovation Fund, Halifax, Canada; French Agence Nationale de la Recherche, France; Alzheimer's Research SAO-FRA, Belgium Grant Review
2015, 2022	UK Medical Research Council (MRC) Neurosciences and Mental Health Board Scientific Quinquennial Review of the MRC Prion Unit, London
2016	UK Medical Research Council (MRC) Scientific Expert Group for UK Dementia Research Institute Directorship Review Panel
2019	UK Medical Research Council (MRC), Neurosciences and Mental Health, Grant Review
2019-present	Alzheimer's Association International Research Grant Program Council
2019-present	Alzheimer's Association Zenith Fellows Review Panel, Member (2019-2020) Co-chair (2021), Chair (2022-present)
2020	UK Wellcome Trust Collaborative Award Program Grant Review

National review panels

2002-2005	John Douglas French Alzheimer's Foundation Fellowship Review
2005	NIH Molecular Cellular and Developmental Neuroscience Study Section, Ad hoc member
2010	NIH Integrative, Functional, and Cognitive Neuroscience Special Emphasis Panel (SEP)
2010-2022	NIH Cellular and Molecular Neurodegeneration Study Section, Ad hoc 2010-2016, Permanent member 2017-2022, Chair 2020-2022
2012	NIH Neurodegeneration, Mechanisms and Therapeutic Targets SEP
	NIH Developmental and Degenerative Pathways in CNS SEP
2013	NIH EUREKA SEP
	NIH Neuropsychiatric and Neuroimmunologic Studies SEP
2016	NIA Alzheimer's Disease SEP
2016-2017	NINDS Research Program Award (R35) SEP
2017	NIA Alzheimer's Disease SEP, Chair
2017-present	BrightFocus Foundation Alzheimer's Disease Research Scientific Review Committee
2018	NIA Intramural Program Review, Baltimore, MD, Ad hoc
2019-2020	Indiana Alzheimer's Disease Center Pilot Project Review Committee; Florida Department of Health Ed and Ethel Moore Alzheimer's Disease Research Program Review; Pennsylvania Department of Health Formula Grants Final Performance Review
2021	Chair, NIH/NIA Connectome, Aging, and AD U01 study section
2022-present	External Advisory Board, Tau Metabolism Center Without Walls U54 NS123985
2022	Chair, NIH/NIA P01 SEP 2022
2023	Chair, NIH/NIA U01 SEP
2024	Chair, NIH Fellowships: Aging, Neurodegeneration, and Neurotoxicology
2024 (planned)	NIA Alzheimer's Disease (P01) SEP
2024 (planned)	NIH Alzheimer's Disease (R01) SEP

INSTITUTIONAL (BCM)

2009-2011	Institutional Diversity Council
2010-2016	Department of Neuroscience Seminar Committee; Chair, 2010-2012
2016-2017	Alzheimer's Disease and Memory Disorders Center Director Search Committee
2015-2020	Founding Member, Faculty Senate
2017-2020	Faculty Senate Administrative Operations Committee
2017-2023	Advanced Technology Cores Faculty Oversight Committee
2019-present	Department of Neuroscience Faculty Advancements and Promotions Committee
2021	BCM Center for Comparative Medicine Executive Director Search Committee
2024	BCM Job Architecture Review Stakeholder Panel

TEACHING

At Baylor College of Medicine (BCM)

2009, 2011	Lecturer, Bench to Bedside: Neurodegeneration, 805-466
2009-2017	Course Director and Lecturer, Core Neuroscience, 220-511
2009-2019	Lecturer, Neurobiology of Disease, 350-422
2011	Course Director and Discussion Leader, MSTP Reading Course, GS-GS-548
2011-2014	Lecturer, Biology of Aging and Age-Related Diseases, 242-430
2012-present	Discussion Leader, Graduate Student and Postdoctoral Ethics Training
2012-present	Course Director, Lecturer, and Discussion Leader, Special Topics in Neuroscience, Preparing for Your Neuroscience Qualifying Exam, GS-NE-463 / 350-447 / GS-NE-447 / GS-NE-5101
2013	Lecturer, Introduction to Neuroscience Methods, 350-428
2013	Laboratory Coordinator, Neuroscience Methods Laboratory, 350-429
2014-2018	Lecturer, Analysis of Neuronal Function, GS-NE-350-431
2016	Course Director and Discussion Leader, MCB Reading Course, 320-548
2019	Lecturer, Pathophysiology and Mechanisms of Human Disease, GS-TB-402

At Other Institutions

2010	Guest Lecturer, Advanced Biochemistry, CHEM 4334, University of St. Thomas, Houston, TX
2011	Guest Lecturer, Neurobiology of Disease, BIOL 36, Amherst College, Amherst, MA
2015	Lecturer, The Future of Neuroscience, GHUM1416.F15.1, Susanne M. Glasscock School of Continuing Studies, Rice University, Houston, TX
2016	Lecturer, Midweek Medley, GRET2001.S16.1, Susanne M. Glasscock School of Continuing Studies, Rice University, Houston, TX
2016	Guest Lecturer, Neuroscience, The Kinkaid School (Pre-Kindergarten through High School), Houston, TX

Curriculum development work (BCM)

2016-present	Neuroscience Graduate Program Curriculum Committee, Chair 2016-2022 *In this position, I helped to create 4 new courses for our program and restructure 3 others based on student feedback.*
2018-present	Graduate School of Biomedical Sciences Curriculum Committee

Graduate administration (BCM)

2014-2016	Huffington Center on Aging NIA Biology of Aging Training Grant Steering Committee
2017-2019	Molecular and Cellular Biology Graduate Program Standing Examination Committee
2015-present	Neuroscience Graduate Program Executive Committee Member
2015-present	Neuroscience Graduate Program Thesis Advisory Reporting Committee Member

2016-present Associate Director, Graduate Program in Neuroscience

In this position, I help to oversee the progress of our 70+ graduate students. The program has grown from 8-10 students/year to 12-19/year, with >80 graduate faculty. Our training program is nationally recognized with an NIH training grant currently in its 30th continuous year of funding.

2021-present MD/PhD Medical Scientist Training Program Faculty Operating Committee

Teaching Awards

2010 The 8-Stranded β-Barrel Jelly Roll Award, Best Lecturer, BCM Graduate School

2012 The 8-Stranded β-Barrel Jelly Roll Award, Best Lecturer, BCM Graduate School

2013 The 8-Stranded β-Barrel Jelly Roll Award, Best Lecturer, BCM Graduate School

2013 Retired from consideration for 8-Stranded Beta-Barrel Jelly Roll Lecturer Award for five years

2014 The 8-Stranded β-Barrel Jelly Roll Award, Best Course (Neuroscience), BCM Graduate School

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MENTORING

Postdoctoral trainees

Tang-Cheng Lee, Ph.D., 2008-2011
Current position: Privately employed, Taiwan

Shaefali Rodgers, Ph.D., 2009-2011
NIH/NIA Biology of Aging Training Grant T32 AG000183, 2009-2011
Current position: Assistant Professor, Exercise Science & Health Promotion, Florida Atlantic University

Ji-Yoen Kim, Ph.D., 2009-2014
Current position: Assistant Professor, Molecular and Human Genetics, BCM

Rong Zhao, Ph.D., 2009-2017
Current position: Senior Staff Scientist, BCM (Ji lab)

Stephanie W. Fowler, Ph.D., 2011-2014
Current position: Assistant Professor, Molecular Virology and Microbiology, BCM

Min-Yu Sun, Ph.D., 2012-2014
Current position: Assistant Editor, Cell Press

Stacy D. Grunke, Ph.D., 2012-2019
NIH/NIA Biology of Aging Training Grant T32 AG000183, 2013-2015
BrightFocus Foundation Research Fellowship, A2016016F, 2015-2017
Alzheimer's Association Research Fellowship AAFR-17-533487, 2017-2019
Current position: Bioscience Writers Neuroscience Editor

Konstantinos Sousounis, Ph.D., 2014-2016
Current position: Assistant Professor, Molecular, Cellular and Biomedical Sciences, University of New Hampshire

Madhusudhanan M. Keralapurath, Ph.D., 2014-2017
Current position: Surgical Neurophysiologist, UCSF

Claudia Huichalaf-Navarette, Ph.D., 2014-2017
NIH/NINDS Brain Disorders and Development T32 NS043124, 2014-2016
Current position: Principal Scientist, Alexion Pharmaceuticals

Anand Kumar Singh, Ph.D., 2017-2018
Current position: Staff Scientist, MD Anderson Cancer Center (Yuan Pan)

Jonathan C. Bean, Ph.D., 2019-2020
Current position: Research Associate, BCM (Yong Xu)

Ruben Gomez-Gutierrez, Ph.D., 2019-2022
Current position: Institute Research Investigator, MD Anderson Cancer (Neurodegeneration Consortium)

Emily Koller, Ph.D., 2020-2023
Current position: Associate Clinical Trial Manager, Medpace

George Edwards, III, Ph.D., 2020-present
NIH/NINDS Brain Disorders and Development T32 NS043124, 2020-2022
Scientist Mentoring & Diversity Program for Biotechnology Scholar, 2023
Alzheimer's Association Research Fellowship-Diversity AAFR-D-23-1074706, 2023-2026

Cameron Trueblood, Ph.D., 2022-2023
Current position: Scientist, Leadership Development Program, Eli Lilly and Co.

Jini Sugatha, Ph.D., 2023-present

Jabob M. Dundee, Ph.D., 2024-present

Graduate students

Heather A. Born, Ph.D. in Neuroscience, 2014
Mary Owen Greenwood Graduate Scholarship, BCM, 2008
NIH/NIA Biology of Aging Training Grant T32 AG000183, 2010-2012
Poster Award, Gordon Research Conference: Neurobiology of Brain Disorders, 2012
Poster Award, University of Texas Austin Conference on Learning and Memory, 2013
Postgraduate training: Postdoctoral Fellow, BCM (Anne Anderson)
Current position: Associate Director, Gene Therapy Program, University of Pennsylvania

Michael J. Yetman, Ph.D. in Neuroscience, 2015
AAAS/Science Program for Excellence in Science Award, 2010
Department of Neuroscience Outstanding Educator Award, Teaching Assistant, 2012
NIH/NIA Biology of Aging Training Grant T32 AG000183, 2012-2013
Science for Life Laboratory – Stockholm Scholarship for the Keystone Symposium Conference on Adult Neurogenesis, 2014
Post-graduate training: Postdoctoral Fellow, Max Planck Florida Institute for Neuroscience (Hiroki Taniguchi)
Current position: Biology Teacher, Proof School, San Francisco

Angie Chi An Chiang, Ph.D. in Neuroscience, 2016
NIH/NIA Biology of Aging Training Grant T32 AG000183, 2012-2014
Best Student Presentation, Helen and Rush Record Research Forum, 2015
Post-graduate training: Postdoctoral Fellow, MD Anderson Cancer Center (Jacoba (Cobi) J. Heijnen)
Current position: Manager, Samsung Research

Quynh Nguyen, Ph.D. in Biochemistry, 2023
Current position: Consultant, ClearView Healthcare Partners

Gabriella Perez, Candidate in Neuroscience, 2018-present
NIH/NIGMS Initiative for Maximizing Student Diversity Scholar, R25 GM056929, 2017-2019
Travel Scholarship, NEURAL Conference, University of Alabama at Birmingham, 2019
SACNAS Houston Chapter Executive Board Member 2018-present, President, 2021-present
HHMI James H. Gilliam, Jr. Fellowship for Advanced Study, GT13620, 2020-2024
Scientist Mentoring & Diversity Program for Biotechnology Scholar, 2022
SACNAS Student Presentation Award, 2022

Caleb Wood, Candidate in Neuroscience, 2018-present
Poster award, Texas Alzheimer's Research and Care Consortium Annual Symposium, 2021
NIH/NIA National Research Service Award, F31 AG067676-01A1, 2021-2024
BCM Graduate Student Symposium Elevator Pitch Award, 2021

Peter Joonsoo Kim, Candidate in Molecular and Cellular Biology, 2019-present

Ella Borgenheimer, Candidate in Neuroscience, 2022-present

Thesis committee advisor

I have served on nearly 50 graduate thesis committees at BCM since 2008, of which 11 are currently ongoing.

Undergraduate training

I have provided hands-on laboratory training to 13 undergraduate students from neighboring Rice University since 2008. Students have generally stayed with the laboratory for 1-4 years allowing them to become substantially invested in our research. Our undergraduate students have co-authored five papers with my group including two as first author. Many of these students have gone on to medical training at UTSW, Penn, BCM, UCSF, and other top schools across the country.