



JoAnn Buchanan

Postdoctoral Scholar, Neurology and Neurological Sciences

 NIH Biosketch available Online

Bio

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Member, Society for Neuroscience (1990 - present)
- Member, American Society for Cell Biology (1985 - present)

PROFESSIONAL EDUCATION

- Master of Science, Northeastern University (1983)
- Doctor of Philosophy, Northeastern University (2021)
- Bachelor of Arts and Science, Russell Sage College (1974)
- M.S., Northeastern University , Cell Biology (1983)

STANFORD ADVISORS

- Michelle Monje-Deisseroth, Postdoctoral Faculty Sponsor

Publications

PUBLICATIONS

- **The three-dimensional micro- and nanostructure of the aortic medial lamellar unit measured using 3D confocal and electron microscopy imaging** *MATRIX BIOLOGY*
O'Connell, M. K., Murthy, S., Phan, S., Xu, C., Buchanan, J., Spilker, R., Dalman, R. L., Zarins, C. K., Denk, W., Taylor, C. A.
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- **Drosophila Niemann-Pick Type C-2 genes control sterol homeostasis and steroid biosynthesis: a model of human neurodegenerative disease** *DEVELOPMENT*
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- **The elementary unit of store-operated Ca²⁺ entry: local activation of CRAC channels by STIM1 at ER-plasma membrane junctions** *JOURNAL OF CELL BIOLOGY*
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- **Ca²⁺ store depletion causes STIM1 to accumulate in ER regions closely associated with the plasma membrane** *JOURNAL OF CELL BIOLOGY*
Wu, M. M., Buchanan, J., Luik, R. M., Lewis, R. S.
2006; 174 (6): 803-813
- **A Drosophila model of the Niemann-Pick type C lysosome storage disease: dnpc1a is required for molting and sterol homeostasis** *DEVELOPMENT*

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- Huang, X., Suyama, K., Buchanan, J., Zhu, A. J., Scott, M. P.
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- **Cell-autonomous death of cerebellar Purkinje neurons with autophagy in Niemann-Pick type C disease** *PLOS GENETICS*
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 - **Retrograde regulation of synaptic vesicle endocytosis and recycling** *NATURE NEUROSCIENCE*
Micheva, K. D., Buchanan, J., Holz, R. W., Smith, S. J.
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 - **Visualizing recycling synaptic vesicles in hippocampal neurons by FM 1-43 photoconversion** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Harata, N., Ryan, T. A., Smith, S. J., Buchanan, J., Tsien, R. W.
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 - **Assembly of presynaptic active zones from cytoplasmic transport packets** *NATURE NEUROSCIENCE*
Ahmari, S. E., Buchanan, J., Smith, S. J.
2000; 3 (5): 445-451
 - **Growth cone and dendrite dynamics in zebrafish embryos: early events in synaptogenesis imaged in vivo** *NATURE NEUROSCIENCE*
Jontes, J. D., Buchanan, J., Smith, S. J.
2000; 3 (3): 231-237
 - **Prolonged activation of mitochondrial conductances during synaptic transmission** *SCIENCE*
Jonas, E. A., Buchanan, J., Kaczmarek, L. K.
1999; 286 (5443): 1347-1350
 - **Golgi membrane skeleton: Identification, localization and oligomerization of a 195 kDa ankyrin isoform associated with the Golgi complex** *JOURNAL OF CELL SCIENCE*
Beck, K. A., Buchanan, J. A., NELSON, W. J.
1997; 110: 1239-1249
 - **GOLGI SPECTRIN - IDENTIFICATION OF AN ERYTHROID BETA-SPECTRIN HOMOLOG ASSOCIATED WITH THE GOLGI-COMPLEX** *JOURNAL OF CELL BIOLOGY*
Beck, K. A., Buchanan, J. A., Malhotra, V., NELSON, W. J.
1994; 127 (3): 707-723
 - **MESSY FIBER GROWTH AND SYNAPTOGENESIS IN RAT HIPPOCAMPAL SLICES IN-VITRO** *JOURNAL OF NEUROSCIENCE*
Dailey, M. E., Buchanan, J. A., Bergles, D. E., Smith, S. J.
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 - **THE SPATIAL-DISTRIBUTION OF CALCIUM SIGNALS IN SQUID PRESYNAPTIC TERMINALS** *JOURNAL OF PHYSIOLOGY-LONDON*
Smith, S. J., Buchanan, J., OSSES, L. R., Charlton, M. P., Augustine, G. J.
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 - **STUDIES OF NERVE MUSCLE INTERACTIONS IN XENOPUS CELL-CULTURE - FINE-STRUCTURE OF EARLY FUNCTIONAL CONTACTS** *JOURNAL OF NEUROSCIENCE*
Buchanan, J., Sun, Y. A., Poo, M. M.
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 - **Fingering the trigger for neurotransmitter secretion: studies on the calcium channels of squid giant presynaptic terminals.** *Society of General Physiologists series*
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 - **CYCLIC-AMP INDUCES CHANGES IN DISTRIBUTION AND TRANSPORT OF ORGANELLES WITHIN GROWTH CONES OF APLYSIA BAG CELL NEURONS** *JOURNAL OF NEUROSCIENCE*
Forscher, P., Kaczmarek, L. K., Buchanan, J. A., Smith, S. J.
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