




Mehrdad Shamloo

Professor (Research) of Neurosurgery and, by courtesy, of Neurology and Neurological Sciences

 NIH Biosketch available Online

 Curriculum Vitae available Online

 Resume available Online

CONTACT INFORMATION

• Administrative Contact

Tammie R. Forbes - Office Manager

Email tforbes@stanford.edu

Tel (650) 721-2353

Bio

BIO

Professor Mehrdad Shamloo has held several positions at various biopharmaceutical companies in the San Francisco Bay Area, with demonstrated extensive focus on both CNS drug discovery and pre-clinical development. In 2008, Dr. Shamloo joined Stanford University and established the Behavioral and Functional Neuroscience Laboratory (BFNL), as well as his research laboratory, which focused on the furtherment of understanding of normal and pathological brain functions in neurological disorders such as Alzheimer's disease (AD), Parkinson's disease (PD), substance use disorders and pain.

Prof. Shamloo's efforts and research are currently directed toward the neurodegenerative pathways responsible for Selective Neuronal Vulnerability of sensitive brain nuclei in the abovementioned disorders. Through these investigations, he aims to understand the processes leading to the functional and behavioral malfunction in these neurological disorders and to develop novel therapeutics to treat them subsequently. Long term, Dr. Shamloo seeks to accelerate the translation of experimental discoveries to novel therapeutic approaches, and to ultimately improve the quality of life for patients with brain disorders.

Prof. Shamloo received his doctoral degree from the Wallenberg Neuroscience Center of Lund University in Sweden.

ACADEMIC APPOINTMENTS

- Professor (Research), Neurosurgery
- Professor (Research) (By courtesy), Neurology and Neurological Sciences
- Member, Bio-X
- Member, Wu Tsai Neurosciences Institute

ADMINISTRATIVE APPOINTMENTS

- Director, Behavioral and Functional Neuroscience Laboratory, (2007-2030)
- Director, Stanford Program for Integrated Neuroscience Technologies, (2022-2030)
- Program Director, Institute of Neuro-Innovation and Translational Neurosciences, (2008-2013)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Member Student Advisor Board, Stanford University (2019 - present)
- Advisor and member, SPARK Stanford University Advisory Board (2015 - present)
- Member Bio-X, Stanford University (2014 - present)
- Faculty Advisor, School of Medicine Cores Advisory Board, Stanford University (2011 - present)
- Faculty Advisor, Advisory Board Member of Stanford Neuro Microscopy Core (2010 - present)
- Faculty Advisor, Advisory Board Member of Stanford SIM-1 Advisory Committee, School of Medicine (2010 - present)
- Faculty Advisor, Advisory Board Member of Stanford Neuro Gene & Viral Vector Core (2010 - present)

PROFESSIONAL EDUCATION

- B.S., Malmo College , Health and Science (1994)
- MS, Medical School, University of Lund, Sweden , BioMedical (1998)
- Ph.D., Faculty of Medicine, Univesity of Lund, Sweden (Wallenberg Neuroscience Research Center) , Medical Science (1999)

PATENTS

- Mehrdad Shamloo. "United States see my publication list"
- Mehrdad Shamloo. "United States see my publication list"
- Evans AK, Green Mj, Jahangir A, Shamloo M, Yi B. "United States Patent US11173144B2 Adrenergic Receptor Modulating Compounds and Methods of Using the Same", Leland Stanford Junior University, Nov 16, 2021

LINKS

- Shamloo Laboratory: <http://neurosurgery.stanford.edu/research/shamloo/>
- Behavioral and Functional Neuroscience Laboratory: <http://sbfnl.stanford.edu/>
- SPRiNT: <https://med.stanford.edu/sprint.html>

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

My laboratory aims to better understand normal and pathological brain function so that we can contribute to the discovery of novel therapeutic approaches for neurologic disorders such as Alzheimer's disease (AD), Parkinson's disease, stroke and autism. We have focused our efforts on targets involved in neurodegenerative pathways responsible for Selective Neuronal Vulnerability of sensitive nuclei in brain in these disorders.

We have identified Beta adrenergic system as one of key player in brain function in these disorders. Beta adrenergic modulation of the inflammation, cognition and pathological progression of CNS diseases are key projects in the lab. We are studying the mechansitic basis for modulation of inflammation, pathology and cognition in these disorsds.

Teaching

COURSES

2023-24

- Workshop on Translational Behavioral Pharmacology: NSUR 244 (Sum)

Publications

PUBLICATIONS

- **Impact of noradrenergic inhibition on neuroinflammation and pathophysiology in mouse models of Alzheimer's disease.** *Journal of neuroinflammation*
Evans, A. K., Park, H. H., Woods, C. E., Lam, R. K., Rijsketic, D. R., Xu, C., Chu, E. K., Ciari, P., Blumenfeld, S., Vidano, L. M., Saw, N. L., Heifets, B. D., Shamloo, et al
2024; 21 (1): 322
- **Mapping of catecholaminergic denervation, neurodegeneration, and inflammation in 6-OHDA-treated Parkinson's disease mice.** *Research square*
Santoro, M., Lam, R. K., Blumenfeld, S. E., Tan, W., Ciari, P., Chu, E. K., Saw, N. L., Rijsketic, D. R., Lin, J. S., Heifets, B. D., Shamloo, M.
2024
- **Schwann cell-secreted PGE2 promotes sensory neuron excitability during development.** *Cell*
Kantarci, H., Elvira, P. D., Thottumkara, A. P., O'Connell, E. M., Iyer, M., Donovan, L. J., Dugan, M. Q., Ambiel, N., Granados, A., Zeng, H., Saw, N. L., Brosius Lutz, A., Sloan, et al
2024
- **Impact of high-fat diet on cognitive behavior and central and systemic inflammation with aging and sex differences in mice.** *Brain, behavior, and immunity*
Evans, A. K., Saw, N. L., Woods, C. E., Vidano, L. M., Blumenfeld, S., Lam, R. K., Chu, E. K., Reading, C., Shamloo, M.
2024
- **Beta-2 adrenergic receptor agonism alters astrocyte phagocytic activity and has potential applications to psychiatric disease.** *Discover mental health*
Bowen, E. R., DiGiacomo, P., Fraser, H. P., Guttenplan, K., Smith, B. A., Heberling, M. L., Vidano, L., Shah, N., Shamloo, M., Wilson, J. L., Grimes, K. V.
2023; 3 (1): 27
- **Locus Coeruleus and Noradrenergic Pharmacology in Neurodegenerative Disease.** *Handbook of experimental pharmacology*
Matt, R. A., Martin, R. S., Evans, A. K., Gever, J. R., Vargas, G. A., Shamloo, M., Ford, A. P.
2023
- **The anti-inflammatory effects of photobiomodulation are mediated by cytokines: Evidence from a mouse model of inflammation.** *Frontiers in neuroscience*
Shamloo, S., Defensor, E., Ciari, P., Ogawa, G., Vidano, L., Lin, J. S., Fortkort, J. A., Shamloo, M., Barron, A. E.
2023; 17: 1150156
- **Maturation and circuit integration of transplanted human cortical organoids.** *Nature*
Revah, O., Gore, F., Kelley, K. W., Andersen, J., Sakai, N., Chen, X., Li, M. Y., Birey, F., Yang, X., Saw, N. L., Baker, S. W., Amin, N. D., Kulkarni, et al
2022; 610 (7931): 319-326
- **Upregulating Human Cathelicidin Antimicrobial Peptide LL-37 Expression May Prevent Severe COVID-19 Inflammatory Responses and Reduce Microthrombosis** *Frontiers in Immunology*
Aloul, K. M., Nielsen, J. E., Defensor, E. B., Lin, J. S., Fortkort, J. A., Shamloo, M., Cirillo, J. D., Gombart, A. F., Barron, A. E.
2022; 13: 1-16
- **Selective Vulnerability of the Locus Coeruleus Noradrenergic System and its Role in Modulation of Neuroinflammation, Cognition, and Neurodegeneration.** *Frontiers in pharmacology*
Evans, A. K., Defensor, E., Shamloo, M.
2022; 13: 1030609
- **Collagen VI regulates motor circuit plasticity and motor performance by cannabinoid modulation.** *The Journal of neuroscience : the official journal of the Society for Neuroscience*
Lam, D. D., Williams, R. H., Lujan, E., Tanabe, K., Huber, G., Saw, N. L., Merl-Pham, J., Salminen, A. V., Lohse, D., Spendiff, S., Plastini, M. J., Zech, M., Lochmuller, et al
1800
- **Exercise plasma boosts memory and dampens brain inflammation via clusterin.** *Nature*

De Miguel, Z., Khoury, N., Betley, M. J., Lehallier, B., Willoughby, D., Olsson, N., Yang, A. C., Hahn, O., Lu, N., Vest, R. T., Bonanno, L. N., Yerra, L., Zhang, et al
2021

- **Pursuing the Next Generation of Anesthetic and Anticonvulsant Compounds**
Bertaccini, E. J., Davies, F., Jahangir, A., McCarren, H., Lam, R. K., Shamloo, M., Cayla, N., Maciver, B.
LIPPINCOTT WILLIAMS & WILKINS.2021: 81-82
- **Enantiomers of 2-methylglutamate and 2-methylglutamine selectively impact mouse brain metabolism and behavior.** *Scientific reports*
Wawro, A. M., Gajera, C. R., Baker, S. A., Lesniak, R. K., Fischer, C. R., Saw, N. L., Shamloo, M., Montine, T. J.
2021; 11 (1): 8138
- **Blocking the CXCL12/CXCR4 pathway both radiosensitizes brain metastases in mice and protects against radiation-induced cognitive dysfunction following whole brain irradiation in rats.**
Brown, M., Shamloo, M., Chernikova, S., Recht, L.
AMER ASSOC CANCER RESEARCH.2021
- **Age-related neuroinflammation and pathology in the locus coeruleus and hippocampus: beta-adrenergic antagonists exacerbate impairment of learning and memory in aged mice.** *Neurobiology of aging*
Evans, A. K., Park, H. H., Saw, N. L., Singhal, K., Ogawa, G., Leib, R. D., Shamloo, M.
2021; 106: 241-256
- **Enantiomers of 4-aminopentanoic acid act as false GABAergic neurotransmitters and impact mouse behavior.** *Journal of neurochemistry*
Wawro, A. M., Gajera, C. R., Baker, S. A., Leśniak, R. K., Montine, K. S., Fischer, C. R., Saw, N. L., Shamloo, M., Montine, T. J.
2021
- **Beta-adrenergic receptor antagonism is proinflammatory and exacerbates neuroinflammation in a mouse model of Alzheimer's Disease.** *Neurobiology of disease*
Evans, A. K., Ardestani, P. n., Yi, B. n., Park, H. H., Lam, R. n., Shamloo, M. n.
2020: 105089
- **Reactions to Multiple Ascending Doses of the Microtubule Stabilizer TPI-287 in Patients With Alzheimer Disease, Progressive Supranuclear Palsy, and Corticobasal Syndrome: A Randomized Clinical Trial.** *JAMA neurology*
Tsai, R. M., Miller, Z., Koestler, M., Rojas, J. C., Ljubenkov, P. A., Rosen, H. J., Rabinovici, G. D., Fagan, A. M., Cobigo, Y., Brown, J. A., Jung, J. I., Hare, E., Geldmacher, et al
2019
- **Activity-dependent modulation of hippocampal synaptic plasticity via PirB and endocannabinoids** *MOLECULAR PSYCHIATRY*
Djurisic, M., Brott, B. K., Saw, N. L., Shamloo, M., Shatz, C. J.
2019; 24 (8): 1206–19
- **LRRK2 modifies alpha-syn pathology and spread in mouse models and human neurons** *ACTA NEUROPATHOLOGICA*
Bieri, G., Brahic, M., Bousset, L., Couthouis, J., Kramer, N. J., Ma, R., Nakayama, L., Monbureau, M., Defensor, E., Schuele, B., Shamloo, M., Melki, R., Gitler, et al
2019; 137 (6): 961–80
- **PGE(2) signaling via the neuronal EP2 receptor increases injury in a model of cerebral ischemia** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Liu, Q., Liang, X., Wang, Q., Wilson, E. N., Lam, R., Wang, J., Kong, W., Tsai, C., Pan, T., Larkin, P. B., Shamloo, M., Andreasson, K. I.
2019; 116 (20): 10019–24
- **Peripheral TREM1 responses to brain and intestinal immunogens amplify stroke severity** *Nature Immunology*
Liu, Q., Johnson, E., et al
2019
- **Intracerebral Delivery of Brain-Derived Neurotrophic Factor Using HyStem (R)-C Hydrogel Implants Improves Functional Recovery and Reduces Neuroinflammation in a Rat Model of Ischemic Stroke** *INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES*
Ravina, K., Briggs, D. I., Kislal, S., Warraich, Z., Nguyen, T., Lam, R. K., Zarembinski, T. I., Shamloo, M.
2018; 19 (12)
- **Early adolescent Rai1 reactivation reverses transcriptional and social interaction deficits in a mouse model of Smith-Magenis syndrome** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*

- Huang, W., Wang, D. C., Allen, W. E., Klope, M., Hu, H., Shamloo, M., Luo, L.
2018; 115 (42): 10744–49
- **Interaction of mitochondrial fission factor with dynamin related protein 1 governs physiological mitochondria function in vivo** *SCIENTIFIC REPORTS*
Kornfeld, O. S., Qvit, N., Haileselassie, B., Shamloo, M., Bernardi, P., Mochly-Rosen, D.
2018; 8
 - **Activity-dependent modulation of hippocampal synaptic plasticity via PirB and endocannabinoids.** *Molecular psychiatry*
Djurisic, M. n., Brott, B. K., Saw, N. L., Shamloo, M. n., Shatz, C. J.
2018
 - **Inhibition of Drp1/Fis1 interaction slows progression of amyotrophic lateral sclerosis.** *EMBO molecular medicine*
Joshi, A. U., Saw, N. L., Vogel, H. n., Cunningham, A. D., Shamloo, M. n., Mochly-Rosen, D. n.
2018
 - **Drp1/Fis1 interaction mediates mitochondrial dysfunction, bioenergetic failure and cognitive decline in Alzheimer's disease.** *Oncotarget*
Joshi, A. U., Saw, N. L., Shamloo, M. n., Mochly-Rosen, D. n.
2018; 9 (5): 6128–43
 - **Small molecule modulator of sigma 2 receptor is neuroprotective and reduces cognitive deficits and neuroinflammation in experimental models of Alzheimer's disease.** *Journal of neurochemistry*
Yi, B., Sahn, J. J., Ardestani, P. M., Evans, A. K., Scott, L. L., Chan, J. Z., Iyer, S., Crisp, A., Zuniga, G., Pierce, J. T., Martin, S. F., Shamloo, M.
2017; 140 (4): 561-575
 - **Modulation of neuroinflammation and pathology in the 5XFAD mouse model of Alzheimer's disease using a biased and selective beta-1 adrenergic receptor partial agonist.** *Neuropharmacology*
Ardestani, P. M., Evans, A. K., Yi, B., Nguyen, T., Coutellier, L., Shamloo, M.
2017; 116: 371-386
 - **Discovery of novel brain permeable and G protein-biased beta-1 adrenergic receptor partial agonists for the treatment of neurocognitive disorders.** *PLoS one*
Yi, B. n., Jahangir, A. n., Evans, A. K., Briggs, D. n., Ravina, K. n., Ernest, J. n., Farimani, A. B., Sun, W. n., Rajadas, J. n., Green, M. n., Feinberg, E. N., Pande, V. S., Shamloo, et al
2017; 12 (7): e0180319
 - **A novel pharmacological tool blocks physiological mitochondrial fission through specifically inhibiting the Mff-Drp1 protein-protein interaction.**
Kornfeld, O. S., Qvit, N., Monbureau, M., Halpain, M., Shamloo, M., Mochly-Rosen, D.
AMER SOC CELL BIOLOGY.2017
 - **The Golgi Outpost Protein TPPP Mediates Uniform Microtubule Polarity and Branching in Oligodendrocytes.**
Fu, M., Osés-Prieto, J. A., Lee, C., Saw, N. L., Shi, R., Nori, M., Shamloo, M., Burlingame, A., Barres, B. A.
AMER SOC CELL BIOLOGY.2017
 - **A small molecule p75NTR ligand normalizes signalling and reduces Huntington's disease phenotypes in R6/2 and BACHD mice.** *Human molecular genetics*
Simmons, D. A., Belichenko, N. P., Ford, E. C., Semaan, S., Monbureau, M., Aiyaswamy, S., Holman, C. M., Condon, C., Shamloo, M., Massa, S. M., Longo, F. M.
2016; 25 (22): 4920-4938
 - **Potential biomarkers to follow the progression and treatment response of Huntington's disease.** *Journal of experimental medicine*
Disatnik, M., Joshi, A. U., Saw, N. L., Shamloo, M., Leavitt, B. R., Qi, X., Mochly-Rosen, D.
2016
 - **Novel, selective EPO receptor ligands lacking erythropoietic activity reduce infarct size in acute myocardial infarction in rats** *PHARMACOLOGICAL RESEARCH*
Kiss, K., Csonka, C., Paloczi, J., Pipis, J., Goerbe, A., Kocsis, G. F., Murlasits, Z., Sarkoezy, M., Szucs, G., Holmes, C. P., Pan, Y., Bhandari, A., Csont, et al
2016; 113: 62-70

- **Molecular and Neural Functions of Rai1, the Causal Gene for Smith-Magenis Syndrome.** *Neuron*
Huang, W., Guenther, C. J., Xu, J., Nguyen, T., Schwarz, L. A., Wilkinson, A. W., Gozani, O., Chang, H. Y., Shamloo, M., Luo, L.
2016; 92 (2): 392-406
- **An 8-week, open-label, dose-finding study of Nimodipine for the treatment of progranulin insufficiency from GRN gene mutations**
Sha, S., Miller, Z., Min, S., Zhou, Y., Mitic, L., Karydas, A., Koestler, M., Tsai, R., Corbetta-Rastelli, C., Lin, S., Hare, E., Brown, J., Fitch, et al
WILEY-BLACKWELL.2016: 255-56
- **Critical role of acetylation in tau-mediated neurodegeneration and cognitive deficits.** *Nature medicine*
Min, S., Chen, X., Tracy, T. E., Li, Y., Zhou, Y., Wang, C., Shirakawa, K., Minami, S. S., Defensor, E., Mok, S. A., Sohn, P. D., Schilling, B., Cong, et al
2015; 21 (10): 1154-1162
- **Drug-controllable protein tags for the selective visualization or selective shutoff of newly synthesized proteins of interest in mammalian cells and in vivo**
Jacobs, C., Geng, Y., Badiie, R., Nguyen, T., Evans, A., Chung, H., Yang, Y., Shamloo, M., Tsien, R. Y., Lin, M. Z.
WILEY-BLACKWELL.2015: 230
- **Utilizing a novel peptide inhibitor to modulate mitochondrial dynamics and investigate Drp1's physiological roles.**
Kornfeld, O. S., Qvit, N., Disatnik, M., Monbureau, M., Halpain, M., Evans, A., Shamloo, M., Rosen, D.
AMER SOC CELL BIOLOGY.2015
- **Behavioral abnormalities and circuit defects in the Basal Ganglia of a mouse model of 16p11.2 deletion syndrome.** *Cell reports*
Portmann, T., Yang, M., Mao, R., Panagiotakos, G., Ellegood, J., Dolen, G., Bader, P. L., Grueter, B. A., Goold, C., Fisher, E., Clifford, K., Rengarajan, P., Kalikhman, et al
2014; 7 (4): 1077-92
- **A death receptor 6-amyloid precursor protein pathway regulates synapse density in the mature CNS but does not contribute to Alzheimer's disease-related pathophysiology in murine models.** *journal of neuroscience*
Kallop, D. Y., Meilandt, W. J., Gogineni, A., Easley-Neal, C., Wu, T., Jubb, A. M., Yaylaoglu, M., Shamloo, M., Tessier-Lavigne, M., Searce-Levie, K., Weimer, R. M.
2014; 34 (19): 6425-6437
- **β 1-adrenergic receptor activation enhances memory in Alzheimer's disease model.** *Annals of clinical and translational neurology*
Coutellier, L., Ardestani, P. M., Shamloo, M.
2014; 1 (5): 348-360
- **the Basal Ganglia of a Mouse Model of 16p11.2 Deletion Syndrome** *CELL REPORTS*
Portmann, T., Yang, M., Mao, R., Panagiotakos, G., Ellegood, J., Dolen, G., Bader, P. L., Grueter, B. A., Goold, C., Fisher, E., Clifford, K., Rengarajan, P., Kalikhman, et al
2014; 7 (4): 1077-1092
- **Small Molecule p75(NTR) Ligands Reduce Pathological Phosphorylation and Misfolding of Tau, Inflammatory Changes, Cholinergic Degeneration, and Cognitive Deficits in A beta PPL/S Transgenic Mice** *JOURNAL OF ALZHEIMERS DISEASE*
Nguyen, T. V., Shen, L., Vander Griend, L., Quach, L. N., Belichenko, N. P., Saw, N., Yang, T., Shamloo, M., Wyss-Coray, T., Massa, S. M., Longo, F. M.
2014; 42 (2): 459-483
- **Alzheimer's therapeutics targeting amyloid beta 1-42 oligomers I: Abeta 42 oligomer binding to specific neuronal receptors is displaced by drug candidates that improve cognitive deficits.** *PLoS one*
Izzo, N. J., Staniszewski, A., To, L., Fa, M., Teich, A. F., Saeed, F., Wostein, H., Walko, T., Vaswani, A., Wardius, M., Syed, Z., Ravenscroft, J., Mozzoni, et al
2014; 9 (11)
- **Inhibition of mitochondrial fragmentation diminishes Huntington's disease-associated neurodegeneration** *JOURNAL OF CLINICAL INVESTIGATION*
Guo, X., Disatnik, M., Monbureau, M., Shamloo, M., Mochly-Rosen, D., Qi, X.
2013; 123 (12): 5371-5388
- **A Small Molecule TrkB Ligand Reduces Motor Impairment and Neuropathology in R6/2 and BACHD Mouse Models of Huntington's Disease.** *journal of neuroscience*
Simmons, D. A., Belichenko, N. P., Yang, T., Condon, C., Monbureau, M., Shamloo, M., Jing, D., Massa, S. M., Longo, F. M.

2013; 33 (48): 18712-18727

- **A Dramatic Increase of C1q Protein in the CNS during Normal Aging** *JOURNAL OF NEUROSCIENCE*
Stephan, A. H., Madison, D. V., Mateos, J. M., Fraser, D. A., Lovelett, E. A., Coutellier, L., Kim, L., Tsai, H., Huang, E. J., Rowitch, D. H., Berns, D. S., Tenner, A. J., Shamloo, et al
2013; 33 (33): 13460-13474
- **GluN2B Antagonism Affects Interneurons and Leads to Immediate and Persistent Changes in Synaptic Plasticity, Oscillations, and Behavior.** *Neuropsychopharmacology*
Hanson, J. E., Weber, M., Meilandt, W. J., Wu, T., Luu, T., Deng, L., Shamloo, M., Sheng, M., Scearce-Levie, K., Zhou, Q.
2013; 38 (7): 1221-1233
- **A pharmacological screening approach for discovery of neuroprotective compounds in ischemic stroke.** *PLoS one*
Beraki, S., Litrus, L., Soriano, L., Monbureau, M., To, L. K., Braithwaite, S. P., Nikolich, K., Urfer, R., Oksenberg, D., Shamloo, M.
2013; 8 (7)
- **FoxO6 regulates memory consolidation and synaptic function** *GENES & DEVELOPMENT*
Salih, D. A., Rashid, A. J., Colas, D., de la Torre-Ubieta, L., Zhu, R. P., Morgan, A. A., Santo, E. E., Ucar, D., Devarajan, K., Cole, C. J., Madison, D. V., Shamloo, M., Butte, et al
2012; 26 (24): 2780-2801
- **A role for C1q in normal brain aging**
Stephan, A. H., Madison, D. V., Mateos, J., Fraser, D., Coutellier, L., Lovelett, E., Tsai, H., Huang, E., Rowitch, D., Kim, L., Tenner, A., Shamloo, M., Barres, et al
ELSEVIER GMBH, URBAN & FISCHER VERLAG.2012: 1133-33
- **Npas4: A Neuronal Transcription Factor with a Key Role in Social and Cognitive Functions Relevant to Developmental Disorders** *PLOS ONE*
Coutellier, L., Beraki, S., Ardestani, P. M., Saw, N. L., Shamloo, M.
2012; 7 (9)
- **Stratification substantially reduces behavioral variability in the hypoxic-ischemic stroke model** *BRAIN AND BEHAVIOR*
Pollak, J., Doyle, K. P., Mamer, L., Shamloo, M., Buckwalter, M. S.
2012; 2 (5): 698-706
- **Deficits in Cognition and Synaptic Plasticity in a Mouse Model of Down Syndrome Ameliorated by GABA(B) Receptor Antagonists** *JOURNAL OF NEUROSCIENCE*
Kleschevnikov, A. M., Belichenko, P. V., Faizi, M., Jacobs, L. F., Htun, K., Shamloo, M., Mobley, W. C.
2012; 32 (27): 9217-9227
- **Thy1-hAPP(Lond/Swe+) mouse model of Alzheimer's disease displays broad behavioral deficits in sensorimotor, cognitive and social function** *BRAIN AND BEHAVIOR*
Faizi, M., Bader, P. L., Saw, N., Nguyen, T. V., Beraki, S., Wyss-Coray, T., Longo, F. M., Shamloo, M.
2012; 2 (2): 142-154
- **Identification of a central role for complement in osteoarthritis** *NATURE MEDICINE*
Wang, Q., Rozelle, A. L., Lopus, C. M., Scanzello, C. R., Song, J. J., Larsen, D. M., Crish, J. F., Bebek, G., Ritter, S. Y., Lindstrom, T. M., Hwang, I., Wong, H. H., Punzi, et al
2011; 17 (12): 1674-U196
- **Mouse model of Timothy syndrome recapitulates triad of autistic traits** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Bader, P. L., Faizi, M., Kim, L. H., Owen, S. F., Tadross, M. R., Alfa, R. W., Bett, G. C., Tsien, R. W., Rasmusson, R. L., Shamloo, M.
2011; 108 (37): 15432-15437
- **Autism-linked neuroligin-3 R451C mutation differentially alters hippocampal and cortical synaptic function** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Eherton, M., Foeldy, C., Sharma, M., Tabuchi, K., Liu, X., Shamloo, M., Malenka, R. C., Suedhof, T. C.
2011; 108 (33): 13764-13769
- **Comprehensive behavioral phenotyping of Ts65Dn mouse model of Down Syndrome: Activation of pradrenergic receptor by xamoterol as a potential cognitive enhancer** *NEUROBIOLOGY OF DISEASE*

- Faizi, M., Bader, P. L., Tun, C., Encarnacion, A., Kleschevnikov, A., Belichenko, P., Saw, N., Priestley, M., Tsien, R. W., Mobley, W. C., Shamloo, M. 2011; 43 (2): 397-413
- **Sex-Specific Cognitive Deficits and Regional Brain Volume Loss in Mice Exposed to Chronic, Sublethal Hypoxia** *PEDIATRIC RESEARCH*
Lan, W. J., Priestley, M., Mayoral, S. R., Tian, L., Shamloo, M., Penn, A. A. 2011; 70 (1): 15-20
 - **Long-term behavioral assessment of function in an experimental model for ischemic stroke** *JOURNAL OF NEUROSCIENCE METHODS*
Encarnacion, A., Horie, N., Keren-Gill, H., Bliss, T. M., Steinberg, G. K., Shamloo, M. 2011; 196 (2): 247-257
 - **The sigma-1 receptor enhances brain plasticity and functional recovery after experimental stroke** *BRAIN*
Ruscher, K., Shamloo, M., Rickhag, M., Ladunga, I., Soriano, L., Gisselsson, L., Toresson, H., Ruslim-Litrus, L., Oksenberg, D., Urfer, R., Johansson, B. B., Nikolich, K., Wieloch, et al 2011; 134: 732-746
 - **Transplanted Stem Cell-Secreted Vascular Endothelial Growth Factor Effects Poststroke Recovery, Inflammation, and Vascular Repair** *STEM CELLS*
Horie, N., Pereira, M. P., Niizuma, K., Sun, G., Keren-Gill, H., Encarnacion, A., Shamloo, M., Hamilton, S. A., Jiang, K., Huhn, S., Palmer, T. D., Bliss, T. M., Steinberg, et al 2011; 29 (2): 274-285
 - **The asparaginyl endopeptidase legumain after experimental stroke** *JOURNAL OF CEREBRAL BLOOD FLOW AND METABOLISM*
Ishizaki, T., Erickson, A., Kuric, E., Shamloo, M., Hara-Nishimura, I., Inacio, A. R., Wieloch, T., Ruscher, K. 2010; 30 (10): 1756-1766
 - **Human recombinant EPO reduces myocardial ischemia/reperfusion injury**
Bencsik, P., Gorbe, A., Kocsis, G. F., Csonka, C., Csont, T., Shamloo, M., Woodburn, K. W., Ferdinandy, P. OXFORD UNIV PRESS.2010: S135
 - **Comprehensive behavioral assays to enhance phenotype to genotype linkages and therapeutic screening in mouse models of Down syndrome** *FUTURE NEUROLOGY*
Shamloo, M., Belichenko, P. V., Mobley, W. C. 2010; 5 (4): 467-71
 - **Vascular Regenerative Effects of Human Neural Progenitor Cells in the Ischemic Brain: A Role in Functional Recovery**
Horie, N., Bliss, T., Niizuma, K., Pereira, M., Sun, G., Keren-Gill, H., Jiang, K., Encarnacion, A., Shamloo, M., Huhn, S., Steinberg, G. K. LIPPINCOTT WILLIAMS & WILKINS.2010: E209
 - **Classical MHC I Molecules Regulate Retinogeniculate Refinement and Limit Ocular Dominance Plasticity** *NEURON*
Datwani, A., McConnell, M. J., Kanold, P. O., Micheva, K. D., Busse, B., Shamloo, M., Smith, S. J., Shatz, C. J. 2009; 64 (4): 463-470
 - **Restoration of Norepinephrine-Modulated Contextual Memory in a Mouse Model of Down Syndrome** *SCIENCE TRANSLATIONAL MEDICINE*
Salehi, A., Faizi, M., Colas, D., Valletta, J., Laguna, J., Takimoto-Kimura, R., Kleschevnikov, A., Wagner, S. L., Aisen, P., Shamloo, M., Mobley, W. C. 2009; 1 (7)
 - **A Mouse Model for Studying Functional Recovery from Stroke**
Pollak, J., Debsi, B., Mamer, L. E., Liu, S., Doyle, K. P., Jones, B., Shamloo, M., Buckwalter, M. LIPPINCOTT WILLIAMS & WILKINS.2009: E214
 - **NGF SIGNALING TO SECURE NEURONAL CIRCUITS**
Mobley, W., Salehi, A., Nosheny, R., Maloney, M., Zhan, K., Chial, H., Sung, K., Brown, H., Belichenko, P., Kleschevnikov, A., Shamloo, M., He, L., Valletta, et al WILEY-BLACKWELL PUBLISHING, INC.2009: 15
 - **Restoration of Hippocampally-Mediated Contextual Memory in TS65DN Mouse Model of Down Syndrome**
Salehi, A., Faizi, M., Colas, D., Valletta, J., Kleschevnikov, A., Shamloo, M., Mobley, W. C. WILEY-LISS.2009: S63

- **Expression and function of striatal enriched protein tyrosine phosphatase is profoundly altered in cerebral ischemia** *EUROPEAN JOURNAL OF NEUROSCIENCE*
Braithwaite, S. P., Xu, J., Leung, J., Urfer, R., Nikolich, K., Oksenberg, D., Lombroso, P. J., Shamloo, M.
2008; 27 (9): 2444-2452
- **Npas4, a novel helix-loop-helix PAS domain protein, is regulated in response to cerebral ischemia** *EUROPEAN JOURNAL OF NEUROSCIENCE*
Shamloo, M., Soriano, L., Von Schack, D., Rickhag, M., Chin, D. J., Gonzalez-Zulueta, M., Gido, G., Urfer, R., Wieloch, T., Nikolich, K.
2006; 24 (10): 2705-2720
- **Comprehensive regional and temporal gene expression profiling of the rat brain during the first 24 h after experimental stroke identifies dynamic ischemia-induced gene expression patterns, and reveals a biphasic activation of genes in surviving tissue** *JOURNAL OF NEUROCHEMISTRY*
Rickhag, M., Wieloch, T., Gido, G., Elmer, E., Krogh, M., Murray, J., Lohr, S., Bitter, H., Chin, D. J., von Schack, D., Shamloo, M., Nikolich, K.
2006; 96 (1): 14-29
- **Death-associated protein kinase is activated by dephosphorylation in response to cerebral ischemia** *JOURNAL OF BIOLOGICAL CHEMISTRY*
Shamloo, M., Soriano, L., Wieloch, T., Nikolich, K., Urfer, R., Oksenberg, D.
2005; 280 (51): 42290-42299
- **Protein kinase C-gamma and calcium/calmodulin-dependent protein kinase II-alpha are persistently translocated to cell membranes of the rat brain during and after middle cerebral artery occlusion** *JOURNAL OF CEREBRAL BLOOD FLOW AND METABOLISM*
Matsumoto, S., Shamloo, M., Matsumoto, E., Isshiki, A., Wieloch, T.
2004; 24 (1): 54-61
- **Uncoupling protein-2 prevents neuronal death and diminishes brain dysfunction after stroke and brain trauma** *NATURE MEDICINE*
Mattiasson, G., Shamloo, M., Gido, G., Mathi, K., Tomasevic, G., Yi, S. L., Warden, C. H., Castilho, R. F., Melcher, T., Gonzalez-Zulueta, M., Nikolich, K., Wieloch, T.
2003; 9 (8): 1062-1068
- **Persistent phosphorylation of synaptic proteins following middle cerebral artery occlusion** *JOURNAL OF CEREBRAL BLOOD FLOW AND METABOLISM*
Matsumoto, S., Shamloo, M., Isshiki, A., Wieloch, T.
2002; 22 (9): 1107-1113
- **Subcellular distribution and autophosphorylation of calcium/calmodulin-dependent protein kinase II-alpha in rat hippocampus in a model of ischemic tolerance** *NEUROSCIENCE*
Shamloo, M., Kamme, F., Wieloch, T.
2000; 96 (4): 665-674
- **Activation of p53 and its target genes p21(WAF1/Cip1) PAG608/Wig-1 in ischemic preconditioning** *MOLECULAR BRAIN RESEARCH*
Tomasevic, G., Shamloo, M., Israeli, D., Wieloch, T.
1999; 70 (2): 304-313
- **Rapid decline in protein kinase C gamma levels in the synaptosomal fraction of rat hippocampus after ischemic preconditioning** *NEUROREPORT*
Shamloo, M., Wieloch, T.
1999; 10 (5): 931-935
- **Changes in protein tyrosine phosphorylation in the rat brain after cerebral ischemia in a model of ischemic tolerance** *JOURNAL OF CEREBRAL BLOOD FLOW AND METABOLISM*
Shamloo, M., Wieloch, T.
1999; 19 (2): 173-183
- **Activation of the extracellular signal-regulated protein kinase cascade in the hippocampal CA1 region in a rat model of global cerebral ischemic preconditioning** *NEUROSCIENCE*
Shamloo, M., Rytter, A., Wieloch, T.
1999; 93 (1): 81-88
- **Regional selective neuronal degeneration after protein phosphatase inhibition in hippocampal slice cultures: Evidence for a MAP kinase-dependent mechanism** *JOURNAL OF NEUROSCIENCE*

- Runden, E., SEGLEN, P. O., Haug, F. M., Ottersen, O. P., Wieloch, T., Shamloo, M., Laake, J. H.
1998; 18 (18): 7296-7305
- **Sublethal in vitro glucose-oxygen deprivation protects cultured hippocampal neurons against a subsequent severe insult** *NEUROREPORT*
Khaspekov, L., Shamloo, M., Victorov, I., Wieloch, T.
1998; 9 (7): 1273-1276
 - **Preconditioning depresses excitatory cell signaling following the second ischemic insult** *2nd International Workshop on the Maturation Phenomenon in Cerebral Ischemia - Neuronal Recovery and Plasticity*
Shamloo, M., Wieloch, T.
SPRINGER-VERLAG BERLIN.1997: 77-84
 - **Effects of preischemic hyperglycemia on brain damage incurred by rats subjected to 2.5 or 5 minutes of forebrain ischemia** *STROKE*
Li, P. A., Kristian, T., Shamloo, M., Siesjo, B. K.
1996; 27 (9): 1592-1601
 - **THE INFLUENCE OF INSULIN-INDUCED HYPOGLYCEMIA ON THE CALCIUM TRANSIENTS ACCOMPANYING REVERSIBLE FOREBRAIN ISCHEMIA IN THE RAT** *EXPERIMENTAL BRAIN RESEARCH*
Li, P. A., Kristian, T., Katsura, K. I., Shamloo, M., Siesjo, B. K.
1995; 105 (3): 363-369
 - **CRITICAL-VALUES FOR PLASMA-GLUCOSE IN AGGRAVATING ISCHEMIC BRAIN-DAMAGE - CORRELATION TO EXTRACELLULAR PH** *NEUROBIOLOGY OF DISEASE*
Li, P. A., Shamloo, M., Katsura, K., Smith, M. L., Siesjo, B. K.
1995; 2 (2): 97-108
 - **THE INFLUENCE OF PLASMA-GLUCOSE CONCENTRATIONS ON ISCHEMIC BRAIN-DAMAGE IS A THRESHOLD FUNCTION** *NEUROSCIENCE LETTERS*
Li, P. A., Shamloo, M., Smith, M. L., Katsura, K., Siesjo, B. K.
1994; 177 (1-2): 63-65
 - **Role of Endoplasmic Reticulum Stress in Learning and Memory Impairment and Alzheimer's Disease-Like Neuropathology in the PS19 and APP(Swe) Mouse Models of Tauopathy and Amyloidosis.** *eNeuro*
Briggs, D. I., Defensor, E. n., Memar Ardestani, P. n., Yi, B. n., Halpain, M. n., Seabrook, G. n., Shamloo, M. n.
; 4 (4)