

Recent Student Publications

[Pilot Study for Grip Force Prediction Using Neural Signals from Different Brain Regions.](#)

Bataineh M, **McNiel D**, Choi J, Hessburg J, **Francis J.**, Proc South Biomed Eng Conf. 2016 Mar;2016:19-20

[Classifier Performance in Primary Somatosensory Cortex Towards Implementation of a Reinforcement Learning Based Brain Machine Interface.](#)

McNiel D, Bataineh M, Choi J, Hessburg J, **Francis J.**, Proc South Biomed Eng Conf. 2016 Mar;2016:17-18

[Reward value is encoded in primary somatosensory cortex and can be decoded from neural activity during performance of a psychophysical task.](#)

McNiel DB, Choi JS, Hessburg JP, Francis JT. Conf Proc IEEE Eng Med Biol Soc. 2016 Aug;2016: 3064-3067

[Eliciting naturalistic cortical responses with a sensory prosthesis via optimized microstimulation.](#)

Choi JS, Brockmeier AJ, **McNiel DB**, Kraus LM, Príncipe JC, Francis JT. J Neural Eng. 2016 Oct;13(5):

[Assessment of arterial stiffness from pedal artery Korotkoff sound recordings: feasibility and potential utility.](#)

Ihsan M, Nunez A, Liu Y, Ahmed F, Patel H, Sharma N, Diaz M, **Stewart M**, **Naggar I**, Saliccioli L, Lazar JM. J Am Soc Hypertens. 2016 Jan;10(1):34-40

[Breaking beta: deconstructing the parasite transmission function.](#)

McCallum H, **Fenton A**, Hudson PJ, **Lee B**, Levick B, Norman R, Perkins SE, Viney M, Wilson AJ, Lello J. Philos Trans R Soc Lond B Biol Sci. 2017 May 5;372

[Persistent modifications of hippocampal synaptic function during remote spatial memory.](#)

Pavlovsky A, **Wallace E**, Fenton AA, Alarcon JM. Neurobiol Learn Mem. 2017 Feb;138:182-197.

Contribution of Endogenous Spinal Endomorphin 2 to Intrathecal Opioid Antinociception in Rats Is Agonist Dependent and Sexually Dimorphic. Kumar A, Liu NJ, Madia PA, Gintzler AR. J Pain. 2015 Nov;16(11):1200-10.

Persistent modifications of hippocampal synaptic function during remote spatial memory.

Pavlovsky A, Wallace E, Fenton AA, Alarcon JM. Neurobiol Learn Mem. 2016 Aug 26. pii: S1074-7427(16)30158-7

Compensation for PKM ζ in long-term potentiation and spatial long-term memory in mutant mice.

Tsokas P, Hsieh C, Yao Y, Lesburguères E, Wallace EJ, Tcherepanov A, Jothianandan D, Hartley BR, Pan L, Rivard B, Farese RV, Sajan MP, Bergold PJ, Hernández AI, Cottrell JE, Shouval HZ, Fenton AA, Sacktor TC. Elife. 2016 May 17.

Prevention of behavioral deficits in rats exposed to folate receptor antibodies: implication in autism.

Desai A, Sequeira JM, Quadros EV. Mol Psychiatry. 2016 Sep 20.

Exposure to Folate Receptor Alpha Antibodies during Gestation and Weaning Leads to Severe Behavioral Deficits in Rats: A Pilot Study. Sequeira JM, **Desai A**, Berrocal-Zaragoza MI, Murphy MM, Fernandez-Ballart JD, Quadros EV. PLoS One. 2016 Mar 24;11(3) 27011008

The metabolic basis for developmental disorders due to defective folate transport. **Desai A**, Sequeira JM, Quadros EV. Biochimie. 2016 Jul;126:31-42.

Estrogens Suppress Spinal Endomorphin 2 Release in Female Rats in Phase with the Estrous Cycle. Kumar A¹, Storman EM, Liu NJ, Gintzler AR. Neuroendocrinology. 2015 Apr 29. [Epub ahead of print]

Lack of parvalbumin in mice leads to behavioral deficits relevant to all human autism core symptoms and related neural morphofunctional abnormalities. Wöhr M, Orduz D, Gregory P, Moreno H, **Khan U**, Vörckel KJ, Wolfer DP, Welzl H, Gall D, Schiffmann SN, Schwaller B. Transl Psychiatry. 2015.

Toward an autonomous brain machine interface: integrating sensorimotor reward modulation and reinforcement learning. **Marsh BT**¹, Tarigoppula VS¹, Chen C², Francis JT³. J Neurosci. 2015 May 13;35(19):7374-87.

A novel, live-attenuated vesicular stomatitis virus vector displaying conformationally intact, functional HIV-1 envelope trimers that elicits potent cellular and humoral responses in mice. **Rabinovich S**¹, Powell RL², Lindsay RW², Yuan M², Carpov A², Wilson A², Lopez M², Coleman JW², Wagner D², Sharma P², Kemelman M², Wright KJ², Seabrook JP², Arendt H², Martinez J², DeStefano J², Chiuchiolo MJ¹, Parks CL¹. PLoS One. 2014 Sep 12;9(9):e106597.

Feasibility of near-infrared spectroscopic tomography for intraoperative functional cerebral monitoring: a primate study. Lee DC, Gevorgyan T, Graber HL, **Pfeil DS**, Xu Y, Mangla S, Barone FC, Libien J, Charchafli J, Kral JG, Ramirez SA, Simpson L, Barbour RL. J Thorac Cardiovasc Surg. 2014.

Oral microbiome link to neurodegeneration in glaucoma. **Astafurov K**, Elhawy E, Ren L, Dong CQ, Igboin C, Hyman L, Griffen A, Mittag T, Danias J. PLoS One. 2014 Sep 2;9(9):e104416.

Enhancing dentate gyrus function with dietary flavanols improves cognition in older adults. Brickman AM, **Khan UA**, Provenzano FA, Yeung LK, Suzuki W, Schroeter H, Wall M, Sloan RP, Small SA. Nat Neurosci. 2014 Dec;17(12):1798-803

Complement expression in the retina is not influenced by short-term pressure elevation. **Astafurov K**¹, Dong CQ², Panagis L¹, Kamthan G³, Ren L¹, Rozenboym A⁴, Perera TD⁵, Coplan JD⁶, Danias J⁷. Mol Vis. 2014 Jan 31;20:140-52. eCollection 2014.

Vagal control of cardiac electrical activity and wall motion during ventricular fibrillation in large animals. **Naggari I**, Nakase K, Lazar J, Saliccioli L, Selesnick I, Stewart M. Auton Neurosci. 2014 Jul;183:12-22.

Quantitative video laryngoscopy to monitor recovery from recurrent laryngeal nerve injury in the rat. Mor N, **Naggari I**, Das O, Nakase K, Silverman JB, Sundaram K, Stewart M, Kollmar R. Otolaryngol Head Neck Surg. 2014 May;150(5):824-6.

Relation of autonomic and cardiac abnormalities to ventricular fibrillation in a rat model of epilepsy. **Naggari I**, Lazar J, Kamran H, Orman R, Stewart M. Epilepsy Res. 2014 Jan;108(1):44-56.

Molecular drivers and cortical spread of lateral entorhinal cortex dysfunction in preclinical Alzheimer's disease. **Khan UA**, Liu L, Provenzano FA, Berman DE, Profaci CP, Sloan R, Mayeux R, Duff KE, Small SA. Nat Neurosci. 2014 Feb;17(2):304-11.

Imaging patients with psychosis and a mouse model establishes a spreading pattern of hippocampal dysfunction and implicates glutamate as a driver. Schobel SA, Chaudhury NH, **Khan UA**, Paniagua B, Styner MA, Asllani I, Inbar BP, Corcoran CM, Lieberman JA, Moore H, Small SA. *Neuron*. 2013 Apr 10;78(1):81-93.

Determination of heart rate variability with an electronic stethoscope. Kamran H, **Naggar I**, Oniyuke F, Palomeque M, Chokshi P, Saliccioli L, Stewart M, Lazar JM. *Clin Auton Res*. 2013 Feb;23(1):41-7.

ω -3 Fatty Acids Prevent Hepatic Steatosis, Independent of PPAR- α Activity, in a Murine Model of Parenteral Nutrition-Associated Liver Disease. Prince E, Lazare FB, Treem WR, Xu J, Iqbal J, Pan X, **Josekutty J**, Walsh M, Anderson V, Hussain MM, Schwarz SM. *JPEN J Parenter Enteral Nutr*. 2013 Jun 11;38(5):608-616. [Epub ahead of print].

Microsomal triglyceride transfer protein inhibition induces endoplasmic reticulum stress and increases gene transcription via Irf1/cJun to enhance plasma ALT/AST. **Josekutty J**, Iqbal J, Iwawaki T, Kohno K, Hussain MM. *J Biol Chem*. 2013 May 17;288(20):14372-83. doi: 10.1074/jbc.M113.459602. Epub 2013 Mar 26.

Measurement of the phospholipase activity of endothelial lipase in mouse plasma. Basu D, Lei X, **Josekutty J**, Hussain MM, Jin W. *J Lipid Res*. 2013 Jan;54(1):282-9. doi: 10.1194/jlr.D031112. Epub 2012 Oct 26.

Use of frontal lobe hemodynamics as reinforcement signals to an adaptive controller. **DiStasio MM**, Francis JT. *PLoS One*. 2013 Jul 22;8(7):e69541. doi: 10.1371/journal.pone.0069541. Print 2013.

Dysregulation of ubiquitin-proteasome pathway and apolipoprotein A metabolism in sickle cell disease-related pulmonary arterial hypertension. Anjum F, Lazar J, **Soh J**, Albitar M, Gowda S, Hussain MM, Wadgaonkar R. *Pulm Circ*. 2013 Dec;3(4):851-5.

Supplementary site interactions are critical for the regulation of microsomal triglyceride transfer protein by microRNA-30c. **Soh J**, Hussain MM. *Nutr Metab (Lond)*. 2013 Sep 4;10(1):56. doi: 10.1186/1743-7075-10-56.

MicroRNA-30c reduces hyperlipidemia and atherosclerosis in mice by decreasing lipid synthesis and lipoprotein secretion. **Soh J**, Iqbal J, Queiroz J, Fernandez-Hernando C, Hussain MM. *Nat Med*. 2013 Jul;19(7):892-900.

Regional vulnerability in Huntington's disease: fMRI-guided molecular analysis in patients and a mouse model of disease. Lewandowski NM, Bordelon Y, Brickman AM, Angulo S, **Khan U**, Muraskin J, Griffith EY, Wasserman P, Menalled L, Vonsattel JP, Marder K, Small SA, Moreno H. *Neurobiol Dis*. 2013 Apr;52:84-93.

An electric field model for prediction of somatosensory (S1) cortical field potentials induced by ventral posterior lateral (VPL) thalamic microstimulation. Choi JS, **DiStasio MM**, Brockmeier AJ, Francis JT. *IEEE Trans Neural Syst Rehabil Eng*. 2012 Mar;20(2):161-9. doi: 10.1109/TNSRE.2011.2181417. Epub 2011 Dec 23.

PKM ζ is necessary and sufficient for synaptic clustering of PSD-95. Shao CY, **Sondhi R**, van de Nes PS, Sacktor TC. *Hippocampus*. 2012 Jul;22(7):1501-7.

R6/2 Huntington's disease mice develop early and progressive abnormal brain metabolism and seizures. Cepeda-Prado E, Popp S, **Khan U**, Stefanov D, Rodríguez J, Menalled LB, Dow-Edwards D, Small SA, Moreno H. J Neurosci. 2012 May 9;32(19):6456-67. doi: 10.1523/JNEUROSCI.0388-12.2012.

Autonomic boundary conditions for ventricular fibrillation and their implications for a novel defibrillation technique. **Naggar I**, Uchida S, Kamran H, Lazar J, Stewart M. J Physiol Sci. 2012 Nov;62(6):479-92

Optimizing microstimulation using a reinforcement learning framework. Brockmeier AJ, Choi JS, **Distasio MM**, Francis JT, Príncipe JC. Conf Proc IEEE Eng Med Biol Soc. 2011;2011:1069-72. doi: 10.1109/IEMBS.2011.6090249.

Silencing of the F11R gene reveals a role for F11R/JAM-A in the migration of inflamed vascular smooth muscle cells and in atherosclerosis. **Azari BM**, Marmur JD, Salifu MO, Cavusoglu E, Ehrlich YH, Kornecki E, Babinska A. Atherosclerosis. 2010 Sep;212(1):197-205.

Diet-induced lipid accumulation in phospholipid transfer protein-deficient mice: its atherogenicity and potential mechanism. **Yeang C**, Qin S, Chen K, Wang DQ, Jiang XC. J Lipid Res. 2010 Oct;51(10):2993-3002. doi: 10.1194/jlr.M007088. Epub 2010 Jun 11.

Distinctions between persistent and reversible group I mGluR-induced epileptiform burst prolongation. **Fuortes MG**, **Rico MJ**, Merlin LR. Epilepsia. 2010 Aug;51(8):1633-7.

Stress-induced out-of-context activation of memory. Ježek K¹, **Lee BB**, Kelemen E, McCarthy KM, McEwen BS, Fenton AA. PLoS Biol. 2010 Dec 21;8(12):e1000570.