

## PUBLICATIONS – NEUROSCIENCE – 2020

1. Amanna IJ, **Slifka MK**. Successful Vaccines. *Curr Top Microbiol Immunol*. **2020**;428:1-30. doi: 10.1007/82\_2018\_102. PMID: 30046984; PMCID: PMC6777997.
2. Howland D, Ellederova Z, Aronin N, Fernau D, Gallagher J, Taylor A, Hennebold J, **Weiss AR**, Gray-Edwards H, McBride J. Large Animal Models of Huntington's Disease: What We Have Learned and Where We Need to Go Next. *J Huntingtons Dis*. **2020**;9(3):201-216. doi: 10.3233/JHD-200425. PMID: 32925082; PMCID: PMC7597371.
3. Merchanthaler I, Stennett CA, Haughey B, Puche A, **Urbanski HF**. Establishment of a non-human primate model for menopausal hot flashes. *EC Gynaecol*. **2020 Jan**;9(1):<https://www.econicon.com/ecgy/pdf/establishment-of-a-non-human-primate-model-for-menopausal-hot-flashes.pdf>. Epub 2019 Dec 11. PMID: 32743563; PMCID: PMC7394307.
4. Zhang Y, Yao L, Yang F, Yang S, Edathodathil A, Xi W, **Roe AW**, Li P. INS-fOCT: a label-free, all-optical method for simultaneously manipulating and mapping brain function. *Neurophotonics*. **2020 Jan**;7(1):015014. doi: 10.1117/1.NPh.7.1.015014. Epub 2020 Mar 31. PubMed PMID: 32258220; PubMed Central PMCID: PMC7108754.
5. Wu HL, Weber WC, Shriver-Munsch C, Swanson T, Northrup M, Price H, Armantrout K, Robertson-LeVay M, Reed JS, Bateman KB, Mahyari E, **Thomas A**, Junell SL, Hobbs TR, Martin LD, MacAllister R, Bimber BN, **Slifka MK**, Legasse AW, Moats C, Axthelm MK, Smedley J, Lewis AD, Colgin L, Meyers G, Maziarz RT, Burwitz BJ, Stanton JJ, Sacha JB. Viral opportunistic infections in Mauritian cynomolgus macaques undergoing allogeneic stem cell transplantation mirror human transplant infectious disease complications. *Xenotransplantation*. **2020 Jan 13**:e12578. doi: 10.1111/xen.12578. Epub ahead of print. PMID: 31930750; PMCID: PMC7354885.
6. Steinbach RJ, Haese NN, Smith JL, Colgin LMA, MacAllister RP, Greene JM, Parkins CJ, Kempton JB, Porsov E, Wang X, **Renner LM**, **McGill TJ**, Dozier BL, Kreklywich CN, Andoh TF, Grafe MR, Pecoraro HL, Hodge T, **Friedman RM**, Houser LA, Morgan TK, Stenzel P, Lindner JR, Schelonka RL, Sacha JB, Roberts VHJ, Neuringer M, Brigande JV, Kroenke CD, Frias AE, Lewis AD, Kelleher MA, Hirsch AJ, Streblow DN. A neonatal nonhuman primate model of gestational Zika virus infection with evidence of microencephaly, seizures and cardiomyopathy. *PLoS One*. **2020 Jan 14**;15(1):e0227676. doi: 10.1371/journal.pone.0227676. eCollection 2020. PubMed PMID: 31935257; PMCID: PMC6959612.
7. **Walter NAR**, Zheng CL, Searles RP, McWeeney SK, **Grant KA**, Hitzemann R. Chronic Voluntary Ethanol Drinking in Cynomolgus Macaques Elicits Gene Expression Changes in Prefrontal Cortical Area 46. *Alcohol Clin Exp Res*. **2020 Feb**;44(2):470-478. doi: 10.1111/acer.14259. Epub 2020 Jan 25. PubMed PMID: 31840818; PubMed Central PMCID: PMC7018568.
8. Su W, Matsumoto S, **Banine F**, Srivastava T, Dean J, Foster S, Pham P, Hammond B, Peters A, Girish KS, Rangappa KS, Basappa, Jose J, Hennebold JD, Murphy MJ, Bennett-Toomey J, Back SA, **Sherman LS**. A modified flavonoid accelerates oligodendrocyte maturation and functional remyelination. *Glia*. **2020 Feb**;68(2):263-279. doi: 10.1002/glia.23715. Epub 2019 Sep 6. PMID: 31490574; PMCID: PMC8693768.
9. **Shnitko TA**, **Gonzales SW**, Newman N, **Grant KA**. Behavioral Flexibility in alcohol drinking monkeys: the morning after. *Alcohol Clin Exp Res*. **2020 Mar**;44(3):729-737. doi: 10.1111/acer.14289. Epub 2020 Feb 18. PMID: 31984521; PMCID: PMC7236888.
10. **Liu Z**, **Wang X**, Newman N, **Grant KA**, Studholme C, **Kroenke CD**. Anatomical and diffusion MRI brain atlases of the fetal rhesus macaque brain at 85, 110 and 135 days gestation. *Neuroimage*. **2020**

**Feb 1**;206:116310. doi: 10.1016/j.neuroimage.2019.116310. Epub 2019 Oct 24. PubMed PMID: 31669303; PMCID: PMC6980966.

11. Zaraza D, **Chernov MM**, **Friedman RM**, Yang Y, Rogers JA, **Roe AW** (2020) Going wireless: an optical imaging and optogenetics system for use in awake behaving primates. *Proc. SPIE 11227, Optogenetics and Optical Manipulation*, 1122705 (**20 February 2020**); <https://doi.org/10.1117/12.2546289>.
12. Srivastava T, **Sherman LS**, Back SA. Dysregulation of Hyaluronan Homeostasis During White Matter Injury. *Neurochem Res.* **2020 Mar**;45(3):672-683. doi: 10.1007/s11064-019-02879-1. Epub 2019 Sep 21. PMID: 31542857; PMCID: PMC7060835.
13. Cai Z, Zhu L, Wang M, **Roe AW**, Xi W, Qian J. NIR-II fluorescence microscopic imaging of cortical vasculature in non-human primates. *Theranostics.* **2020 Mar 4**;10(9):4265-4276. doi: 10.7150/thno.43533. eCollection 2020. PubMed PMID: 32226552; PubMed Central PMCID: PMC7086344.
14. Kirigiti MA, Frazee T, Bennett BJ, Arik A, Blundell P, Bader LA, Bagley JL, Frias AE, **Sullivan EL**, Roberts CT Jr, Kievit P. Effects of Pre and Postnatal Protein Restriction on Maternal and Offspring Metabolism in the Nonhuman Primate. *Am J Physiol Regul Integr Comp Physiol.* **2020 May 1**;318(5):R929-R939. doi: 10.1152/ajpregu.00150.2019. Epub 2020 Mar 4. PMID: 32130027; PMCID: PMC7272768.
15. MacDonald KD, **Davies M**, Lam R, Lund K, Park B, **Spindel ER**, Tepper RS, McEvoy CT. Chinstraps are needed for neonatal nasal CPAP: Reflections from a non-human primate model. *Pediatr Pulmonol.* **2020 May**;55(5):1087-1088. doi: 10.1002/ppul.24716. Epub 2020 Mar 6. PubMed PMID: 32142204; PMCID: PMC7169434.
16. Ma H, Hayama T, Van Dyken C, Darby H, Koski A, Lee Y, Gutierrez NM, Yamada S, Li Y, Andrews M, Ahmed R, Liang D, Gonmanee T, Kang E, Nasser M, Kempton B, Brigande J, **McGill TJ**, Terzic A, Amato P, Mitalipov S. Deleterious mtDNA mutations are common in mature oocytes. *Biol Reprod.* **2020 Mar 13**;102(3):607-619. doi: 10.1093/biolre/ioz202. PubMed PMID: 31621839; PubMed Central PMCID: PMC7068114.
17. Ramirez JSB, Graham AM, Thompson JR, Zhu JY, Sturgeon D, Bagley JL, Thomas E, Papadakis S, Bah M, Perrone A, Earl E, Miranda-Dominguez O, Feczko E, Fombonne EJ, Amaral DG, Nigg JT, **Sullivan EL**, Fair DA. Maternal Interleukin-6 Is Associated With Macaque Offspring Amygdala Development and Behavior. *Cereb Cortex.* **2020 Mar 14**;30(3):1573-1585. doi: 10.1093/cercor/bhz188. PubMed PMID: 31665252; PubMed Central PMCID: PMC7132915.
18. Welter H, Herrmann C, Dellweg N, Missel A, Thanisch C, **Urbanski HF**, Köhn FM, Schwarzer JU, Müller-Taubenberger A, Mayerhofer A. The Glucocorticoid Receptor NR3C1 in Testicular Peritubular Cells is Developmentally Regulated and Linked to the Smooth Muscle-Like Cellular Phenotype. *J Clin Med.* **2020 Mar 31**;9(4). pii: E961. doi: 10.3390/jcm9040961. PubMed PMID: 32244354; PMCID: PMC7230580.
19. **Wang X**, **Cuzon Carlson VC**, Studholme C, Newman N, **Ford MM**, **Grant KA**, Kroenke CD. In utero MRI identifies consequences of early-gestation alcohol drinking on fetal brain development in rhesus macaques. *Proc Natl Acad Sci U S A.* **2020 May 5**;117(18):10035-10044. doi: 10.1073/pnas.1919048117. Epub 2020 Apr 20. PMID: 32312804; PMCID: PMC7211988.
20. Quan Z, Gao Y, Qu S, Wang X, **Friedman RM**, **Chernov MM**, Kroenke CD, Roe AW, Zhang X. A 16-channel loop array for in vivo macaque whole-brain imaging at 3 T. *Magn Reson Imaging.* 2020 May;68:167-172. doi: 10.1016/j.mri.2020.02.008. Epub **2020 Feb 17**. PMID: 32081631; PMCID: PMC7784245.

21. **Cuzon Carlson VC**, Gremel CM, Lovinger DM. Gestational alcohol exposure disrupts cognitive function and striatal circuits in adult offspring. *Nat Commun.* **2020 May 22**;11(1):2555. doi: 10.1038/s41467-020-16385-4. PMID: 32444624; PMCID: PMC7244532.
22. **Weiss AR**, Liguore WA, Domire JS, Button D, **McBride JL**. Intra-striatal AAV2.retro administration leads to extensive retrograde transport in the rhesus macaque brain: implications for disease modeling and therapeutic development. *Sci Rep.* **2020 Apr 24**;10(1):6970. doi: 10.1038/s41598-020-63559-7. PubMed PMID: 32332773; PubMed Central PMCID: PMC7181773.
23. Lee MR, **Shnitko TA**, Blue SW, Kaucher AV, Winchell AJ, Erikson DW, **Grant KA**, Leggio L. Labeled oxytocin administered via the intranasal route reaches the brain in rhesus macaques. *Nat Commun.* **2020 Jun 3**;11(1):2783. doi: 10.1038/s41467-020-15942-1. PMID: 32494001; PMCID: PMC7270110.
24. **Slifka MK**, Messer WB, Amanna IJ. Analysis of COVID-19 transmission: Low risk of presymptomatic spread? *Arch Pathol Lab Med.* **2020 Jun 5**. doi: 10.5858/arpa.2020-0255-LE. Epub ahead of print. PMID: 32501120.
25. Song XM, Li M, Xu T, Hu D, **Roe AW**. Precise Targeting of Single Microelectrodes to Orientation Pinwheel Centers. *Bio Protoc.* **2020 Jun 5**;10(11):e3643. doi: 10.21769/BioProtoc.3643. PMID: 33659313; PMCID: PMC7842334.
26. Kareko BW, Booty BL, Nix CD, Lyski ZL, **Slifka MK**, Amanna IJ, Messer WB. Persistence of Neutralizing Antibody Responses Among Yellow Fever Virus 17D Vaccinees Living in a Nonendemic Setting. *J Infect Dis.* **2020 Jun 11**;221(12):2018-2025. doi: 10.1093/infdis/jiz374. PMID: 31545367; PMCID: PMC7289542.
27. Adachi K, Dissen GA, **Lomniczi A**, Xie Q, Ojeda SR, Nakai H. Adeno-associated virus-binding antibodies detected in cats living in the Northeastern United States lack neutralizing activity. *Sci Rep.* **2020 Jun 22**;10(1):10073. doi: 10.1038/s41598-020-66596-4. PMID: 32572045; PMCID: PMC7308316.
28. Quintel BK, Prongay K, Lewis AD, **Raué HP**, Hendrickson S, Rhoades NS, Messaoudi I, Gao L, **Slifka MK**, Amanna IJ. Vaccine-mediated protection against *Campylobacter*-associated enteric disease. *Sci Adv.* **2020 Jun 24**;6(26):eaba4511. doi: 10.1126/sciadv.aba4511. PMID: 32637610; PMCID: PMC7314533.
29. Zimmerman B, Kundu P, Liu Z, **Urbanski HF**, Kroenke CD, **Kohama SG**, Bethea CL, **Raber J**. Longitudinal Effects of Immediate and Delayed Estradiol on Cognitive Performance in a Spatial Maze and Hippocampal Volume in Menopausal Macaques Under an Obesogenic Diet. *Front Neurol.* **2020 Jun 24**;11:539. doi: 10.3389/fneur.2020.00539. PMID: 32670182; PMCID: PMC7326936.
30. **Thomas A**, Hammarlund E, Gao L, Holman S, Michel KG, Glesby M, Villacres MC, Golub ET, Roan NR, French AL, Augenbraun MH, **Slifka MK**. Loss of Preexisting Immunological Memory Among Human Immunodeficiency Virus-Infected Women Despite Immune Reconstitution With Antiretroviral Therapy. *J Infect Dis.* **2020 Jun 29**;222(2):243-251. doi: 10.1093/infdis/jiz678. PMID: 31867597; PMCID: PMC7323495.
31. Campodonico-Burnett W, Hetrick B, Wesolowski SR, Schenk S, Takahashi DL, Dean TA, **Sullivan EL**, Kievit P, Gannon M, Aagaard K, Friedman JE, McCurdy CE. Maternal Obesity and Western-Style Diet Impair Fetal and Juvenile Offspring Skeletal Muscle Insulin-Stimulated Glucose Transport in Nonhuman Primates. *Diabetes.* **2020 Jul**;69(7):1389-1400. doi: 10.2337/db19-1218. Epub 2020 Apr 30. PMID: 32354857; PMCID: PMC7306120.

32. McEvoy CT, Shorey-Kendrick LE, Milner K, Schilling D, Tiller C, Vuylsteke B, Scherman A, Jackson K, Haas DM, Harris J, Park BS, Vu A, Kraemer DF, Gonzales D, Bunten C, **Spindel ER**, Morris CD, Tepper RS. Vitamin C to Pregnant Smokers Persistently Improves Infant Airway Function to 12 Months of Age: A Randomised Trial. *Eur Respir J.* **2020 Jul 2**;1902208. doi: 10.1183/13993003.02208-2019. Epub ahead of print. PMID: 32616589; PMCID: PMC8029653.
33. Abreu AP, **Toro CA**, Song YB, Navarro VM, Bosch MA, Eren A, Liang JN, Carroll RS, Latronico AC, Rønnekleiv OK, **Aylwin CF**, **Lomniczi A**, Ojeda S, Kaiser UB. MKRN3 inhibits the reproductive axis through actions in kisspeptin-expressing neurons. *J Clin Invest.* **2020 Aug 3**;130(8):4486-4500. doi: 10.1172/JCI136564. PMID: 32407292; PMCID: PMC7410046.
34. Mayerhofer A, Dietrich KG, **Urbanski HF**, Köhn FM, Pickl U, Trottmann M, Kievit P, Welter H. Palmitic Acid Targets Human Testicular Peritubular Cells and Causes a Pro-Inflammatory Response. *J Clin Med.* **2020 Aug 17**;9(8):2655. doi: 10.3390/jcm9082655. PMID: 32824411; PMCID: PMC7463762.
35. **Peters A**, **Sherman LS**. Diverse Roles for Hyaluronan and Hyaluronan Receptors in the Developing and Adult Nervous System. *Int J Mol Sci.* **2020 Aug 20**;21(17):E5988. doi: 10.3390/ijms21175988. PMID: 32825309; PMCID: PMC7504301.
36. Dunn GA, Loftis JM, **Sullivan EL**. Neuroinflammation in psychiatric disorders: An introductory primer. *Pharmacol Biochem Behav.* **2020 Sep**;196:172981. doi: 10.1016/j.pbb.2020.172981. Epub 2020 Jul 1. PMID: 32621927; PMCID: PMC7430067.
37. Hu JM, Qian MZ, Tanigawa H, Song XM, **Roe AW**. Focal Electrical Stimulation of Cortical Functional Networks. *Cereb Cortex.* **2020 Sep 3**;30(10):5532-5543. doi: 10.1093/cercor/bhaa136. PMID: 32483588.
38. **Aylwin CF**, **Lomniczi A**. Sirtuin (SIRT)-1: At the crossroads of puberty and metabolism. *Curr Opin Endocr Metab Res.* **2020 Oct**;14:65-72. doi: 10.1016/j.coemr.2020.06.001. Epub 2020 Jun 12. PMID: 32905232; PMCID: PMC7467505.
39. Gustafsson HC, **Sullivan EL**, Battison EAJ, Holton KF, Graham AM, Karalunas SL, Fair DA, Loftis JM, Nigg JT. Evaluation of maternal inflammation as a marker of future offspring ADHD symptoms: A prospective investigation. *Brain Behav Immun.* **2020 Oct**;89:350-356. doi: 10.1016/j.bbi.2020.07.019. Epub 2020 Jul 21. PMID: 32707260; PMCID: PMC7703804.
40. **Slifka MK**, Gao L. Is presymptomatic spread a major contributor to COVID-19 transmission? *Nat Med.* **2020 Oct**;26(10):1531-1533. doi: 10.1038/s41591-020-1046-6. Epub 2020 Aug 17. PMID: 32807936.
41. Ashaber M, Zalányi L, Pálfi E, Stuber I, Kovács T, **Roe AW**, **Friedman RM**, Négyessy L. Synaptic organization of cortico-cortical communication in primates. *Eur J Neurosci.* **2020 Nov**;52(9):4037-4056. doi: 10.1111/ejn.14905. Epub 2020 Jul 28. PMID: 32654301; PMCID: PMC7874932.
42. **Jimenez VA**, Walter NAR, **Shnitko TA**, Newman N, Diem K, Vanderhooft L, Hunt H, **Grant KA**. Mifepristone Decreases Chronic Voluntary Ethanol Consumption in Rhesus Macaques. *J Pharmacol Exp Ther.* **2020 Nov**;375(2):258-267. doi: 10.1124/jpet.120.000169. Epub 2020 Sep 1. PMID: 32873623; PMCID: PMC7590013.
43. **Friedman RM**, Chehade NG, **Roe AW**, Gharbawie OA. Optical imaging reveals functional domains in primate sensorimotor cortex. *Neuroimage.* **2020 Nov 1**;221:117188. doi: 10.1016/j.neuroimage.2020.117188. Epub 2020 Jul 23. PMID: 32711067; PMCID: PMC7841645.
44. Hu JM, Song XM, Wang Q, **Roe AW**. Curvature domains in V4 of macaque monkey. *Elife.* **2020 Nov 19**;9:e57261. doi: 10.7554/eLife.57261. PMID: 33211004; PMCID: PMC7707819.

45. **Stonebarger GA, Urbanski HF**, Woltjer RL, Vaughan KL, Ingram DK, Schultz PL, Calderazzo SM, Siedeman JA, Mattison JA, Rosene DL, **Kohama SG**. Amyloidosis increase is not attenuated by long-term calorie restriction or related to neuron density in the prefrontal cortex of extremely aged rhesus macaques. *Geroscience*. **2020 Dec**;42(6):1733-1749. doi: 10.1007/s11357-020-00259-0. Epub 2020 Sep 2. PMID: 32876855; PMCID: PMC7732935.
46. Luna SL, Brown DI, **Kohama SG, Urbanski HF**. Lack of effect of short-term DHEA supplementation on the perimenopausal ovary†. *Biol Reprod*. **2020 Dec 1**;103(6):1209-1216. doi: 10.1093/biolre/ioaa160. PMID: 32901819; PMCID: PMC7711893.
47. **Friedman RM**, Morone KA, Gharbawie OA, **Roe AW**. Mapping mesoscale cortical connectivity in monkey sensorimotor cortex with optical imaging and microstimulation. *J Comp Neurol*. 2020 Dec 1;528(17):3095-3107. doi: 10.1002/cne.24918. Epub **2020 May 4**. PMID: 32255200; PMCID: PMC7541397.
48. Bailey AL, Kang LI, de Assis Barros D'Elia Zanella LGF, Silveira CGT, Ho YL, Foquet L, Bial G, McCune BT, Duarte-Neto AN, Thomas A, **Raué HP**, Byrnes K, Kallas EG, **Slifka MK**, Diamond MS. Consumptive coagulopathy of severe yellow fever occurs independently of hepatocellular tropism and massive hepatic injury. *Proc Natl Acad Sci U S A*. **2020 Dec 2**:202014096. doi: 10.1073/pnas.2014096117. Epub ahead of print. PMID: 33268494; PMCID: PMC7768776.
49. **Slifka AM**, Park B, Gao L, **Slifka MK**. Reply to Plotkin. *Clin Infect Dis*. **2020 Dec 15**;71(12):3267-3268. doi: 10.1093/cid/ciaa360. PMID: 32239130; PMCID: PMC8241216.
50. Orlando KA, Douglas AK, Abudu A, Wang Y, Tessier-Cloutier B, **Su W, Peters A, Sherman LS**, Moore R, Nguyen V, Negri GL, Colborne S, Morin GB, Kommos F, Lang JD, Hendricks WP, Raupach EA, Pirrotte P, Huntsman DG, Trent JM, Parker JS, Raab JR, Weissman BE. Re-expression of SMARCA4/BRG1 in Small Cell Carcinoma of Ovary, Hypercalcemic Type (SCCOHT) promotes an epithelial-like gene signature through an AP-1-dependent mechanism. *Elife*. **2020 Dec 23**;9:e59073. doi: 10.7554/eLife.59073. Epub ahead of print. PMID: 33355532; PMCID: PMC7813545.

## 50 Publications