

CURRICULUM VITAE
for
Michael A. Taffe, Ph.D.

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Education:

1990 B.A. The Colorado College, Colorado Springs, CO., Psychology
1992 M.A. University of California, San Diego, La Jolla, CA., Psychology
1995 Ph.D. University of California, San Diego, La Jolla, CA., Psychology

Professional Experience:

1989-1990 **Undergraduate Research Fellow**, Department of Psychology (Dr. John Horner)
The Colorado College; Colorado Springs, CO
1990-1995 **Pre-Doctoral Fellow**, Department of Psychology (Dr. Gordon Baylis)
University of California, San Diego; La Jolla, CA
1995-1996 **Post-Doctoral Fellow**, Department of Psychiatry (Dr. Stephen Foote)
University of California, San Diego; La Jolla, CA
1996-2000 **Post-Doctoral Fellow**, Department of Neuropharmacology (Dr. Lisa Gold)
The Scripps Research Institute; La Jolla, CA
2000-2007 **Assistant Professor**, Committee on the Neurobiology of Addictive Disorders
(Department of Neuropharmacology, 00-05; renamed Molecular and Integrative
Neurosciences Department 9/05) The Scripps Research Institute; La Jolla, CA
2003-2014 **Adjunct Assistant Professor**, Department of Neurosciences
University of California, San Diego; La Jolla, CA
2007-2016 **Associate Professor**, Committee on the Neurobiology of Addictive Disorders
The Scripps Research Institute; La Jolla, CA
2017-pres **Associate Professor**, Department of Neuroscience
The Scripps Research Institute; La Jolla, CA

Awards:

1989 Associated Colleges of the Midwest Minority Summer Research Scholarship
1990-1993 National Science Foundation Predoctoral Fellowship
1994 University of California President's Dissertation Year Fellowship
1996 NIH Postdoctoral Research Fellow: T32 MH 19934
1997-1999 NIH Postdoctoral Research Fellow: T32 MH 19185
1998 Travel Award, College on Problems of Drug Dependence Annual Meeting
1999-2000 Universitywide (California) AIDS Research Program Postdoctoral Fellowship
2000 ACNP/NIMH Travel Fellowship, American College of Neuropsychopharmacology

Professional Societies:

Society for Neuroscience, College on Problems of Drug Dependence, AAAS, International Cannabinoid Research Society

Advisory Activities and Service:

Grant Review: National Institutes of Health (US) Biobehavioral Regulation, Learning and Ethology Study Section (2005-2009); Medical Research Council (UK) ad hoc (5/07); NIH F01 Brain Disorders and Related Neuroscience Fellowship Study Section (11/10); NIH ZRG1 IFCN-H (02) M Special Emphasis Panel (6/11); NIH Neurobiology of Motivated Behavior Study Section (2/13); NIH ZRG1 IFCN-Z (90) S (3/14); Medical Research Council (UK) ad hoc (7/14); NIH BBBP IRG Review Pilot Study (09/14); ZRG1 IFCN-Z (56) R (02/15); FONDECYT Regular grant competition, Chilean National Science and Technology Commission (12/15); NIH IFCN-L(56) (5/2016); NIH NOMD (6/2016); NIH AA-4 (10/16); NIH IFCN-L (56) R (02/17); NIH BBBP-B (59) R (03/17); NIH ZRG1 IFCN-C (56) (7/2017); NIH PMDA (01/2018); NIH ZRG IFCN-C (02) (3/2018);

Academic Editor: PLoS ONE (2012-)

Guest Editor: Neuropharmacology Special Issue on Designer Drugs, 2018, vol 134(A)

Managing Editor: Frontiers in Bioscience, Encyclopedia of Bioscience Special Issue “Nonhuman primate models of neuropsychopathology” <http://bio-mirror.im.ac.cn/mirrors/bioscience/current/special/taffe.htm>

Editorial Board: Neuropsychopharmacology (2008-); Experimental and Clinical Psychopharmacology (2018-); Pharmacology, Biochemistry & Behavior (2018-)

Ad hoc Reviewer for: J Neuroscience, Biological Psychiatry, Neuropsychopharmacology, Addiction Biology, British J Pharmacology, Neuropharmacology, Psychopharmacology (Berl.), Pharmacology, Biochemistry & Behavior, TIPS, Brain Research, Drug and Alcohol Dependence, Journal of Pharmacy and Pharmacology, Behav Br Res, Neuroscience, J Neurochemistry, J Psychiatric Res, Lab Animals, J Neurosci Methods, Am J on Addictions, J Psychopharmacology, Int J Neuropsychopharm

Service Committees: TSRI Neurosciences Seminar Series (04-07); UCSD Neuroscience Graduate Program Minor Proposition (03-05) and Diversity Committees (04-07); CPDD Animals in Research Committee (05-08); CPDD Publications Committee (10-12); CPDD Media Committee (13-16)

Teaching Experience:

NEURO 550: Neurobiology of Alcohol and Drug Addiction: Graduate program advanced topics seminar Lecturer (2016), Graduate Research Program, The Scripps Research Institute

NEU 221: Memory : Graduate program advanced topics seminar Professor (2005)

Department of Neurosciences, University of California, San Diego

Drugs, Addiction and Mental Disorders

Visiting Professor (2000) Department of Psychology, Colorado College, Colorado Springs

Physiological Psychology

Instructor (1999) Dept. of Behavioral Science, Mesa Community College, San Diego

Physiological Psychology

Co-Instructor (1998) Dept. of Behavioral Science, Mesa Community College, San Diego

Physiological Psychology

Instructor (1996) Department of Psychology, University of California, San Diego

Opinion/Editorial:

1. **Taffe, M.A.** Drug abuse scientists should use social media to engage the public because their primary translational product is information. *Drug Alcohol Depend.* 2015 Sep 1;154:315-9.
2. **Taffe, M.A.** Peer review and new investigators. *Science.* 2006 Feb 10;311(5762):775.
3. Taffe, M.A. and Olive, M.F. Designer drugs – A continuing chemical (R)evolution *Neuropharmacology*, 2018, 134(A):1-3.

Peer-Reviewed Chapters / Reviews:

1. Boggs, D.L., Nguyen, J.D., Morgenson, D., **Taffe, M.A.** and Ranganathan, M. Clinical and Pre-Clinical Evidence for Functional Interactions of Cannabidiol and Δ^9 -Tetrahydrocannabinol. *Neuropsychopharmacology Reviews*, 2018 43(1):142-154.
2. Aarde, S.M. and **Taffe, M.A.** Predicting the abuse liability of entactogen-class, new and emerging psychoactive substances via preclinical models of drug self-administration. *Current Topics in Behavioral Neurosciences.* 2017;32:145-164.
3. Burdo, T.H., Katner, S.N., **Taffe, M.A.**, and Fox, H.S. Neuroimmunity, drugs of abuse and neuroAIDS. *J. Neuroimmune Pharmacol*, 2006, 1:41-49.

Research Publications:

1. Gold, L.H., Fox, H.S., Henriksen, S.J., Buchmeier, M.J., Weed, M.R., **Taffe, M.A.**, Huitron-Resendiz, S., Horn, T.F.W., and Bloom, F.E.. Longitudinal analysis of behavioral, neurophysiological, viral and immunological effects of SIV infection in rhesus monkeys. *J Med Primatol*, 1998, 27: 104-112.
2. Weed, M.R., **Taffe, M.A.**, Polis, I., Roberts, A.C., Robbins, T.W., Koob, G.F., Bloom, F.E. and Gold, L.H. Performance norms for a rhesus monkey neuropsychological testing battery: Acquisition and long-term performance. *Cog. Br. Res.*, 1999, 8(3):185-201.
3. **Taffe, M.A.**, Weed, M.R., and Gold, L.H. Scopolamine alters rhesus monkey performance on a novel neuropsychological testing battery. *Cog. Br. Res.*, 1999, 8(3):203-212.
4. **Taffe, M.A.**, Weed, M.R., Davis, S., Huitrón-Resendiz, S., Schroeder, R., Parsons, L.H., Henriksen, S.J. and Gold, L.H. Functional consequences of repeated (+/-)3,4-methylenedioxymethamphetamine (MDMA) treatment in rhesus monkeys, *Neuropsychopharmacology*, 2001, 24(3):230-239.
5. **Taffe, M.A.**, Weed, M.R., Gutierrez, T., Davis, S.A., and Gold, L.H. Differential muscarinic and NMDA contributions to visuo-spatial paired-associate learning in rhesus monkeys, *Psychopharmacology*, 2002, 160:253-262.
6. **Taffe, M.A.**, Davis, S.A., Gutierrez, T., and Gold, L.H. Ketamine impairs multiple cognitive domains in rhesus monkeys, *Drug Alcohol Depend*, 2002, 68(2):174-186.
7. **Taffe, M.A.**, Davis, S.A., Yuan, J., Schroeder, R., Hatzidimitriou, G., Parsons, L.H., Ricaurte, G.A., and Gold, L.H. Cognitive performance of MDMA-treated rhesus monkeys: Sensitivity to serotonergic challenge, *Neuropsychopharmacology*, 2002 27(6):993-1005.

8. Burudi, E.M.E., Marcondes, M.C.G., Watry, D.D., Zandonatti, M.A., **Taffe, M.A.**, and Fox, H.S. Regulation of indoleamine, 2,3-dioxygenase expression in simian immunodeficiency virus-infected monkey brains, *J Virol*, 2002, 76(23): 12233-12241.
9. Roberts, E.S., Zandonatti, M.A., Watry, D.D., Madden, L.J., Henriksen, S.J., **Taffe, M.A.**, and Fox, H.S. Induction of pathogenic sets of genes in macrophages and neurons in NeuroAIDS. *Am J Pathol*, 2003, 162(6):2041-2057.
10. **Taffe, M.A.**, Huitrón-Resendiz, S., Schroeder, R., Parsons, L.H., Henriksen, S.J. and Gold, L.H. MDMA exposure alters cognitive and electrophysiological sensitivity to rapid tryptophan depletion in rhesus monkeys, *Pharmacol Biochem Behav*, 2003, 76(1):141-152.
11. **Taffe, M.A.**, Weed, M.R., Gutierrez, T., Davis, S.A., and Gold, L.H. Modeling a task that is sensitive to dementia of the Alzheimer's type: Individual differences in acquisition of a visuo-spatial paired-associate learning task in rhesus monkeys., *Behav Brain Res*, 2004, 149(2):123-133. PMID: PMC2169504
12. Weed, M.R., Gold, L.H., Polis, I., Koob, G.F., Fox, H.S. and **Taffe M.A.** Impaired performance on a rhesus monkey neuropsychological testing battery following simian immunodeficiency virus infection, *AIDS Res Hum Ret*, 2004, 20(1):77-89.
13. **Taffe, M.A.** Effects of parametric feeding manipulations on behavioral performance in macaques, *Physiol Behav*, 2004, 81(1):59-70. PMID: PMC2174789 Corrigendum in *Physiol Behav*, 2004, 82(2-3):589
14. Madden, L.J., Zandonatti, M.A., Flynn, C.T., **Taffe, M.A.**, Marcondes, M.C.G., Schmitz, J.E., Reimann, K.A., Henriksen, S.J., and Fox, H.F. CD8+ cell depletion amplifies the acute retroviral syndrome, *J Neurovirool*, 2004, 10(Suppl 1): 58-66.
15. Katner, S.N., Flynn, C.T., Von Huben, S.N., Kirsten, A.J., Davis, S.A., Lay, C.C., Cole, M., Roberts, A.J., Fox, H.S. and **Taffe M.A.** Controlled and behaviorally relevant levels of oral ethanol intake in rhesus macaques using a flavorant-fade procedure, *Alcohol Clin Exp Res*, 2004 Jun;28(6):873-883.
16. Katner, S.N., Davis, S.A., Kirsten, A.J. and **Taffe M.A.** Effects of nicotine and mecamylamine on cognition in rhesus monkeys, *Psychopharmacology*, 2004, 175(2):225-240. PMID: PMC2121304
17. Roberts, E.S., Burudi, E.M.E., Flynn, C., Madden, L.J., Roinick, K.L., Watry, D.D., Zandonatti, M.A., **Taffe, M.A.**, and Fox, H.S. Acute SIV infection of the brain leads to upregulation of IL6 and interferon-regulated genes: Expression patterns throughout disease progression and impact on NeuroAIDS, *J Neuroimmunol*, 2004, 157(1-2):81-92.
18. **Taffe, M.A.**, Lay, C.C., Von Huben, S.N., Davis, S.A., Crean, R.D. and Katner, S.N. Hyperthermia induced by 3,4-methylenedioxymethamphetamine in rhesus monkeys, *Drug Alcohol Depend*, 2006, 82(3):276-281. Epub 2005 Nov 11. PMID: PMC1551973
19. Roberts, E.S., Huitrón-Resendiz, S., **Taffe, M.A.**, Flynn, C., Lanigan, C.M., Hammond, J.A., Head, S.R., Henriksen, S.J. and Fox, H.S. Host Response and Dysfunction in the CNS During Chronic SIV Infection, *J Neurosci*, 2006, 26:4577-4585.
20. Crean, R.D., Davis, S.A., Von Huben, S.N., Lay, C.C., Katner, S.N. and **Taffe, M.A.** Effects of (±)3,4-methylenedioxymethamphetamine, (±)3,4-methylenedioxyamphetamine and methamphetamine on temperature and activity in rhesus macaques, *Neuroscience*, 2006, 142(2):515-525. Epub 2006 Jul 28 PMID: PMC1853374
21. Von Huben, S.N., Davis, Lay, C.C., S.A., Katner, S.N. Crean, R.D. and **Taffe, M.A.** Differential contributions of dopaminergic D₁-like and D₂-like receptors to cognitive function in rhesus monkeys, *Psychopharmacology*, 2006, 188(4):586-596. Epub 2006 Mar 15 PMID: PMC2099258
22. Von Huben, S.N., Lay, C.C., Crean, R.D., Davis, S.A., Katner, S.N. and **Taffe, M.A.** Impact of ambient temperature on hyperthermia induced by (±)3,4-

- methylenedioxymethamphetamine in rhesus macaques, *Neuropsychopharmacology*, 2007, 32(3): 673-681. Epub 2006 Apr 12. PMID: PMC2080863
23. Crean, R.D., Davis, S.A. and **Taffe, M.A.** Oral administration of (\pm)3,4-methylenedioxymethamphetamine and (+)methamphetamine alters temperature and activity in rhesus macaques, 2007, *Pharmacol Biochem Behav*, 87(1): 11-19. PMID: PMC1975960
 24. Katner, S.N., Von Huben, S.N., Davis, S.A., Lay, C.C., Crean, R.D., Roberts, A.J., Fox, H.S. and **Taffe M.A.** Robust and stable drinking behavior following long-term oral alcohol intake in rhesus monkeys, *Drug Alcohol Depend*, 91(2-3): 236-243. Epub 2007 Jul 10. PMID: PMC2231844
 25. Marcondes, M.C.G., Watry, D., Zandonatti, M.A., Flynn, C.T., **Taffe, M.A.** and Fox, H.F. Chronic alcohol consumption generates a vulnerable immune environment during early SIV infection in rhesus macaques, *Alcohol Clin Exp Res*. 2008 Sep;32(9):1583-92. Epub 2008 Jul 9; PMID: PMC2579901
 26. **Taffe, M.A.**, Kotzebue, R.W., Crean, R.D., Crawford, E.F., Edwards, S. and Mandyam, C.D. Long-lasting reduction in hippocampal neurogenesis by alcohol consumption in adolescent nonhuman primates, *Proc Natl Acad Sci U S A*. 2010 Jun 15;107(24):11104-9. Epub 2010 Jun 1; PMID: PMC20534463
 27. Crean, R.D., Vandewater, S.A., Katner, S.N., Huitron-Resendiz, S., and **Taffe, M.A.** Chronic alcohol consumption impairs visuo-spatial associative memory in periadolescent rhesus monkeys, *Drug Alc Depend*, 2011; 114:31-40. Epub 2010 Oct 15. PMID: PMC3024459
 28. **Taffe, M.A.** A Comparison of intraperitoneal and subcutaneous temperature in freely moving rhesus macaques, *Physiol Behav*, 103(5):440-444. [Epub ahead of print 2011 Apr 4]; PMID: PMC3107936
 29. Gilpin, N. W., Wright, Jr., M. J., Dickinson, G., Vandewater, S. A., Price, J. U., and **Taffe, M.A.** Influences of activity wheel access on the body temperature response to MDMA and Methamphetamine, *Pharmacol Biochem Behav*. 2011; 99(3):295-300 Epub May 13 2011; PMID: PMC3129476
 30. **Taffe, M.A.** and Taffe, W.J. Rhesus monkeys employ a procedural strategy to reduce working memory load in a self-ordered spatial search task, *Brain Res*. 2011 Sep 21;1413:43-50. Epub 2011 Jul 29. PMID: PMC3167000
 31. Miller, M. L., Vaillancourt, B. D., Wright, Jr., M. J., Aarde, S. M., Vandewater, S. A., Creehan, K. M., and **Taffe, M.A.** Reciprocal inhibitory effects of intravenous d-methamphetamine self-administration and wheel activity in rats, *Drug Alcohol Depend*, *Drug Alcohol Depend*. 121:90-96 2011 Sep 5. [Epub ahead of print]
 32. **Taffe, M.A.** Δ 9-Tetrahydrocannabinol attenuates MDMA-induced hyperthermia in rhesus monkeys, *Neuroscience*, 2012, 201:125-133 Nov 29 2011 [Epub ahead of print]
 33. **Taffe, M.A.** Δ 9-Tetrahydrocannabinol impairs visuo-spatial associative learning and spatial working memory in rhesus macaques, *J Psychopharmacol*, 2012, Oct; 26(10):1299-306. Epub 2012 Apr 22
 34. Huang, P.K., Aarde, S.M., Angrish, D., Houseknecht, K.L., Dickerson, T.J. and **Taffe, M.A.** Contrasting effects of d-methamphetamine, 3,4-methylenedioxymethamphetamine, 3,4-methylenedioxypropylvalerone, and 4-methylmethcathinone on wheel activity in rats, *Drug Alcohol Depend*, 2012, 126(1-2):168-175.
 35. Wright, Jr, M.J., Vandewater, S.A., Angrish, D., Dickerson, T.J. and **Taffe, M.A.** Mephedrone (4-methylmethcathinone, 4MMC) and d-methamphetamine improve visuo-spatial associative memory, but not spatial working memory, in rhesus macaques, *British Journal of Pharmacology*, 2012, 167(6):1342-1352.

36. Wright, Jr, M.J., Angrish, D., Aarde, S.M., Barlow, D.J., Buczynski, M.W., Creehan, K.M., Vandewater, S.A., Parsons, L.H., Houseknecht, K.L., Dickerson, T.J. and **Taffe, M.A.** Effect of ambient temperature on the thermoregulatory and locomotor stimulant effects of 4-methylmethcathinone in Wistar and Sprague-Dawley rats, *PLoS ONE*, 2012, 7(8):e44652. Epub 2012 Aug 31
37. Miller, M.L., Creehan, K.M., Angrish, D., Barlow, D.J., Houseknecht, K.L., Dickerson, T.J. and **Taffe, M.A.** Changes in ambient temperature differentially alter the thermoregulatory, cardiac and locomotor stimulant effects of 4-methylmethcathinone (mephedrone), *Drug Alcohol Depend*, 2013, 127(1-3):248-253 Epub 2012 Jul 23.
38. Miller, M.L., Moreno, A.Y., Aarde, S.M., Creehan, K.M., Vandewater, S.A., Vaillancourt, B.D., Wright, Jr., M.J., Janda, K.D. and **Taffe, M.A.** A methamphetamine vaccine attenuates methamphetamine-induced disruptions in thermoregulation and activity in rats, *Biological Psychiatry*, 2013 Apr 15;73(8):721-8. doi: 10.1016/j.biopsych.2012.09.010. Epub 2012 Oct 23.
39. Wright, Jr., M.J., Glavis-Bloom, C. and **Taffe, M.A.** Acute ethanol reduces reversal cost in discrimination learning by reducing perseverance in adolescent rhesus macaques, *Alcohol Clin Exp Res*, 2013, Jun;37(6):952-960
40. Aarde, S.M., Angrish, D., Barlow, D.J., Wright, Jr., M.J., Vandewater, S.A., Creehan, K.M., Houseknecht, K.L., Dickerson, T.J. and **Taffe, M.A.** Mephedrone (4-methylmethcathinone) supports intravenous self-administration in Sprague-Dawley and Wistar rats. *Addict Biol*, 2013, 18(5):786-799.
41. Wright, Jr, M.J., Vandewater, S.A., Parsons, L.H. and **Taffe, M.A.** Δ 9tetrahydrocannabinol impairs reversal learning but not extra-dimensional shifts in rhesus macaques. *Neuroscience*, 2013, 235:51-58
42. Wright, M.J. Jr., Vandewater, S.A. and **Taffe, M.A.** The influence of acute and chronic alcohol consumption on response time distribution in adolescent rhesus macaques. *Neuropharmacology*, 2013, 70:12-18
43. Aarde, S.M., Huang, P-K, Creehan, K.M., Dickerson, T.J. and **Taffe, M.A.** The novel recreational drug 3,4-methylenedioxypyrovalerone (MDPV) is a potent psychomotor stimulant: self-administration and locomotor activity in rats. *Neuropharmacology*, 2013, 71:130-140.
44. Wright, M.J., Jr., Vandewater, S.A. and **Taffe, M.A.** Cannabidiol attenuates deficits of visuo-spatial associative memory induced by Δ 9-tetrahydrocannabinol, *Br J Pharmacol*, 2013, 170:1365-1373 [*Commentary: "Towards a better Cannabis drug" Mechoulam, R. and Parker, L. Br J Pharmacol, 2013, 170:1363-1364.*]
45. Wright, M.J., Jr. and **Taffe, M.A.** Chronic periadolescent alcohol consumption produces persistent cognitive deficits in rhesus macaques, *Neuropharmacology*, 2014, **86**:78-87
46. Aarde, S.M., Huang, P-K, Dickerson, T.J. and **Taffe, M.A.** Binge-like Acquisition of 3,4-methylenedioxypyrovalerone (MDPV) self-administration and wheel activity in rats. *Psychopharmacology*, 2015 Jun;232(11):1867-77.
47. **Taffe, M.A.**, Creehan, K.M., Vandewater, S.A. Cannabidiol fails to reverse hypothermia or locomotor suppression induced by Δ 9-tetrahydrocannabinol in Sprague-Dawley rats. *British Journal of Pharmacology*, 2015, **172(7)**:1783-1791 Nov 26 [Epub ahead of print]
48. Creehan, K.M., Vandewater, S.A. and **Taffe, M.A.** Intravenous self-administration of mephedrone, methylone and MDMA in female rats. *Neuropharmacology*, 2015, 92:90-97.
49. Aarde, S.M., Miller, M.L., Creehan, K.M., Vandewater, S.A. and **Taffe, M.A.** One day access to a running wheel reduces self-administration of d-methamphetamine, MDMA and Methylone. *Drug Alcohol Depend*, 2015, 151:151-158.
50. Aarde, S.M., Creehan, K.M., Vandewater, S.A., Dickerson, T.J. and **Taffe, M.A.** In vivo potency and efficacy of the novel cathinone α -pyrrolidinopentiophenone and 3,4-

- methylenedioxypropylamphetamine: Self-administration and locomotor stimulation in male rats.. *Psychopharmacology*, 2015, 232:3045-3055.
51. Miller, M.L., Aarde, S.M., Moreno, A.Y., Creehan, K.M., Janda, K.D. and **Taffe, M.A** Effects of active anti-methamphetamine vaccination on intravenous self-administration in rats. *Drug Alcohol Depend*, 2015, 153:29-36.
 52. Vandewater, S.A., Creehan, K.M. and **Taffe, M.A.** Intravenous self-administration of entactogen-class stimulants in male rats. *Neuropharmacology*, 2015, 99:538-545
 53. Nguyen, J.D., Grant, Y., Creehan, K.M., Vandewater, S.A. and **Taffe, M.A.** Escalation of intravenous self-administration of methylone and mephedrone under extended access conditions. *Addiction Biology*, 2016, Apr 5. doi: 10.1111/adb.12398. [Epub ahead of print].
 54. Nguyen, J.D., Aarde, S.M., Vandewater, S.A., Grant, Y., Stouffer, D.G., Parsons, L.H., Cole, M. and **Taffe, M.A.** Inhaled delivery of $\Delta 9$ -tetrahydrocannabinol (THC) to rats by e-cigarette vapor technology, *Neuropharmacology*, 2016, 109:112-120.
 55. Nguyen, J.D., Aarde, S.M., Cole, M., Vandewater, S.A., Grant, Y. and **Taffe, M.A.** Locomotor stimulant and rewarding effects of inhaling methamphetamine, MDPV and mephedrone via electronic cigarette-type technology, *Neuropsychopharmacology*, 2016, 41(11):2759-2771
 56. Nguyen¹, J.D., Bremer¹, P.T., Ducime, A., Creehan, K.M., Kisby, B.R., **Taffe, M.A.** and Janda, K.D. Active vaccination attenuates the psychostimulant effects of α -PVP and MDPV in rats, *Neuropsychopharmacology*, 2017, 116:1-8.
 57. Nguyen, J.D., Bremer, P.T., Hwang, C.S., Vandewater, S.A., Collins, K.C., Creehan, K.M., Janda, K.D. and **Taffe, M.A.** Effective active vaccination against methamphetamine in female rats, *Drug Alcohol Depend*, 2017, 175:179-186.
 58. Vendruscolo, J.C.M., Tunstall, B.J., Carmack, S.A., Schmeichel, B.E., Lowery-Gionta, E.G., Cole, M., George, O., Vandewater, S.A., **Taffe, M.A.**, Koob, G.F. and Vendruscolo, L.F. Compulsive-like sufentanil vapor self-administration in the rat, *Neuropsychopharmacology*, 2018, 43:801-809.
 59. Javadi-Paydar M., Nguyen J.D., Vandewater S.A., Dickerson T.J. and **Taffe M.A.**, Locomotor and reinforcing effects of pentadrone, pentyllone and methylone in rats. *Neuropharmacology*. 2018, 134(A):57-64.
 60. Aarde, S.M., Huang, P-K and **Taffe, M.A.** High Ambient Temperature Facilitates The Acquisition Of 3,4-Methylenedioxymethamphetamine (MDMA) Self-Administration. *Pharmacol Biochem Behav*, 2017, 163:38-49.
 61. Dutta, R.R., **Taffe, M.A.** and Mandyam, C.D. Chronic administration of amphetamines disturbs development of neural progenitor cells in young adult nonhuman primates. *Progress in Neuropsychopharmacology & Biological Psychiatry*, 2018, 85:46-53.
 62. Javadi-Paydar, M., Harvey, E.L., Grant, Y., Vandewater, S.A., Creehan, K.M., Nguyen, J.D., Dickerson, T.J., and **Taffe, M.A.** Binge-like Acquisition of α -pyrrolidinopentiophenone (α -PVP) Self-Administration in Female Rats. *Psychopharmacology*, 2018, *in press*.

¹Authors contributed equally.

Invited Presentations and Symposia

Organized

J. D. Nguyen and **M. A. Taffe**. Behavioral pharmacology of inhaled bath salts. In Bath Salts: The ever-changing landscape of synthetic cathinones. ASPET/Exp Bio, 2018 Organizers S. Kohut / **M. Taffe**.

- M. A. Taffe.** Discussant. CPDD Annual Meeting 2017 Full Symposium: Cloudy, with a chance of intoxication: E-vape models of drug exposure in laboratory animals. Organizers **Taffe/Marusich**
- M. A. Taffe.** Entactogen or stimulant? Locomotor, thermoregulatory and self-administration assays in rats distinguish between novel cathinone analogues, CPDD Annual Meeting 2012 Symposium: A stimulating soak in “bath salts”: Investigating cathinone derivative drugs. Organizers **Taffe/Fleckenstein**

Invited Speaker

- M. A. Taffe.** Self-Administration of THC via Vapor Inhalation in Rats, Winter Conference on Brain Research, Whistler, BC, Canada, 2018. Organizers Setlow/Torregrossa
- M. A. Taffe.** Self-Administration of THC via Vapor Inhalation in Rats, Cannabinoid Function in the CNS Gordon Research Conference, Waterville NH, 2017. Organizers Cheer/Hurd
- M. A. Taffe.** Dissecting the abuse liability of novel synthetic cathinone stimulant drugs; University of New England, Biddeford ME, 2017
- M. A. Taffe.** Methamphetamine in Rodents and Primates: Physiology and Effects on Cognitive Performance, ASPET Annual Meeting 2015 Symposium: Psychomotor stimulant addiction: lessons from methamphetamine. Organizers Nader/Desai
- M. A. Taffe.** Exploring the abuse liability of novel cathinone derivative stimulants (“bath salts”) CSU San Marcos 2015
- M. A. Taffe.** Immunopharmacotherapy Against Methamphetamine Addiction. UCSD Translational Methamphetamine AIDS Research Center 2014
- M. A. Taffe.** Social media and non-traditional strategies for drug-abuse science communication, CPDD Annual Meeting 2014 Workshop: Knowledge Translation in Addiction Sciences: Why and How to Share Research Knowledge Beyond the Academic Community. Organizers Payer/Kaufman
- M. A. Taffe.** Intravenous self-administration of 3,4-methylenedioxypyrovalerone (MDPV) and 4-methylmethcathinone in rats, ACNP Annual Meeting 2013 Mini Panel: Biochemical and Behavioral Pharmacology of Synthetic Cathinone Derivatives Found in Psychoactive Bath Salts Products. Organizers Rothman/Baumann
- M. A. Taffe.** Δ^9 -tetrahydrocannabinol impairs reversal learning and visuo-spatial associative memory in rhesus macaques, ACNP Annual Meeting 2012 panel: The Developmental Trajectory of Cannabis Effects on Neurobiological Functioning. Organizers Mason/Hurd
- M. A. Taffe.** Designer Cathinone Drugs of Abuse: Comparing "Bath Salts" to the Amphetamines. Colorado College, Colorado Springs, CO 2012
- M. A. Taffe.** Designer Cathinone Drugs of Abuse: Comparing "Bath Salts" to the Amphetamines. University of Arkansas for Medical Science. Little Rock, AK 2011
- M. A. Taffe.** Neurotransmitter Soup: Simplifying Neurobehavioral Physiology and Pharmacology. AALAS Annual Meeting. San Diego, CA 2011
- M. A. Taffe.** A Plea to Engage the Public. Animal Research Advocacy Roundtable, Research Society on Alcoholism Annual Meeting, San Antonio, TX 2010
- M. A. Taffe** and H. S. Fox. Nonhuman primate models of drug abuse and AIDS. 8th International Symposium on NeuroVirology. San Diego, CA, 2007
- M. A. Taffe,** S. A. Davis, T. Gutierrez and L. H. Gold. Ketamine broadly affects cognitive function in rhesus monkeys (*Macaca mulatta*). American Society of Primatologists Annual Meeting, Calgary, Alberta, Canada, 2003.
- M. A. Taffe.** Monoamine neuron damage after different dosing strategies in nonhuman primates. College on Problems of Drug Dependence Annual Meeting, Bal Harbor, FL. 2003

- M. A. Taffe.** NMDA, muscarinic and nicotinic contributions to performance of an Alzheimer's-sensitive task in rhesus monkeys. UCSD Dept of Neurosciences Faculty Meeting, October 2002.
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- ***M.A. Taffe**, S.N. Katner, C.C. Lay, S.N. Von Huben, R.D. Crean, S.A. Davis, and A.J. Kirsten. MDMA-induced hyperthermia in rhesus monkeys. College on Problems of Drug Dependence Annual Meeting, Orlando, FL, 2005.
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- M. J. Wright, D. Angrish, S. Aarde, K. Creehan, S. A. Vandewater, T. J. Dickerson and **M. A. Taffe** Effect of rat strain and ambient temperature on the hypothermic and locomotor stimulant properties of 4-methylmethcathinone (4-MMC) College on Problems of Drug Dependence Annual Meeting, Hollywood, FL, 2011
- M.J. Wright, Jr. and **M.A. Taffe** The influence of acute ethanol exposure on frequency distribution during a 5-choice serial reaction time task. Research Society on Alcoholism Annual Meeting, Atlanta, GA, 2011
- M. WRIGHT, JR, S. A. VANDEWATER, M. A. TAFFE; A history of chronic alcohol consumption impairs retention of a visual discrimination in rhesus macaques Society for Neuroscience Annual Meeting, New Orleans, LA, 2012
- M. L. MILLER, S. AARDE, K. CREEHAN, P. HUANG, M. TAFFE; Effects of prazosin, ketanserin, SCH and raclopride on MDMA-, MDPV- and MMC-induced changes in thermoregulatory responses and locomotor activity Society for Neuroscience Annual Meeting, New Orleans, LA, 2012

- S. M. AARDE, P.-K. HUANG, K. CREEHAN, M. TAFFE Determinants of intravenous MDMA self-administration in rats: Effects of ambient temperature Society for Neuroscience Annual Meeting, New Orleans, LA, 2012
- M. A. TAFFE, B. D. VAILLANCOURT, K. M. CREEHAN, P.-K. HUANG, S. M. AARDE, M. L. MILLER How much activity wheel training is required to alter the self-administration of d-methamphetamine? Society for Neuroscience Annual Meeting, New Orleans, LA, 2012
- M L Miller, A Y Moreno, S Aarde, K Creehan, K Janda, M A Taffe; ACTIVE VACCINATION INHIBITS THE ACQUISITION OF METHAMPHETAMINE SELF-ADMINISTRATION IN RATS. College on Problems of Drug Dependence Annual Meeting, San Diego, CA 2013
- M. A. Taffe, M. J. Wright, Jr., S. A. Vandewater. Cannabidiol ameliorates the behavioral impact of THC in monkeys. Cannabinoid Function in the CNS Gordon Research Conference Waterville Valley, NH, 2013
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- S. M. Aarde, S. A. Vandewater, K.M. Creehan, M. Taffe. Alpha-pyrrolidinovalerophenone (alpha-PVP): Self-administration and acute drug challenges in rats. College on Problems of Drug Dependence Annual Meeting Annual Meeting, San Juan, PR, 2014
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- J.D. Nguyen, S.M. Aarde, S.A. Vandewater, Y. Grant, D.G. Stouffer, L.H. Parsons, M. Cole, **M.A. Taffe**. Physiological and Pharmacokinetic Effects of E-Cigarette Type Exposure to Δ^9 -Tetrahydrocannabinol. Experimental Biology, San Diego, CA, April 2016.
- M.A. Taffe**, J.D. Nguyen, P.T. Bremer, S.A. Vandewater, K. Creehan., K.D. Janda. Active Anti-methamphetamine Vaccination Attenuates the Effects of Methamphetamine. Experimental Biology, San Diego, CA, April 2016.
- J.D. Nguyen, S.M. Aarde, S.A. Vandewater, Y. Grant, D.G. Stouffer, L.H. Parsons, M. Cole, M.A. Taffe. Physiological and Pharmacokinetic Effects of E-Cigarette Type Exposure to Δ^9 -Tetrahydrocannabinol (THC) in rats. College on Problems of Drug Dependence Annual Meeting, Palm Springs, CA, June 2016.
- M.A. Taffe, C. Glavis-Bloom, J.D. Nguyen. Cannabidiol attenuates a spatial working memory impairment caused by THC in monkeys. College on Problems of Drug Dependence Annual Meeting, Palm Springs, CA, June 2016.
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- M. Javadi-Paydar, J.D. Nguyen, Y. Grant, S.A. Vandewater, M. Cole, **M.A. Taffe**. Sex differences in delta-9-Tetrahydrocannabinol-induced hypothermia and hypolocomotion in rats. Society for Neuroscience, San Diego, CA, November 2016.

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- J.D. Nguyen, D. Kirson, F.P. Varodayan, S. Khom, M. Roberto, **M.A. Taffe**. Determination of kappa opioid receptor contributions to re-escalation of oxycodone self-administration under extended access conditions. Society for Neuroscience, San Diego, CA, November 2016.
- M. A. Taffe**, S. A. Vandewater, J. D. Nguyen, Cole, M. Self-Administration of Psychostimulants Via Vapor Inhalation in Rats. Society for Neuroscience Annual Meeting, San Diego, CA; 2016.
- M. A. Taffe**, S. A. Vandewater, J. D. Nguyen, Cole, M. Inhalation Self-Administration of Addictive Drugs Via E-Cigarette Technology in Rats. American College of Neuropsychopharmacology Annual Meeting; Hollywood, FL; 2016.
- J.D. Nguyen, D. Kirson, F.P. Varodayan, S. Khom, R. Patel, D. Hedges, M. Roberto, **M.A. Taffe**. Kappa opioid receptor signaling contributes to re-escalation of oxycodone self-administration under extended access conditions. Experimental Biology, Chicago, IL, April 2017.
- M.A. Taffe**, S.A. Vandewater, K. Creehan, J.D. Nguyen, M. Javadi-Paydar. Pharmacological interrogation of hypothermia induced by vapor inhalation of THC in rats. College on Problems of Drug Dependence Annual Meeting, Montreal, QC, June 2017.
- M. Javadi-Paydar, J.D. Nguyen, S.A. Vandewater, M. Cole, **M.A. Taffe**. $\Delta 9$ -Tetrahydrocannabinol potentiates hyperlocomotion induced by nicotine in rats. College on Problems of Drug Dependence Annual Meeting, Montreal, QC, June 2017.
- J.D. Nguyen, K. Creehan, Grants, Y., S.A. Vandewater, M. Cole, **M.A. Taffe** Repeated vapor inhalation of $\Delta 9$ -Tetrahydrocannabinol (THC) induces tolerance to hypothermia in rats. Gordon Research Conference and Seminar, Waterville Valley, NH, August 2017.
- M. Javadi-Paydar, J. D. Nguyen, S. A. Vandewater, M. Cole, **M. A. Taffe**. Sex differences in delta-9-Tetrahydrocannabinol and nicotine vapor co-administration in rats. Gordon Research Conference, Waterville Valley, NH 2017
- M. Javadi-Paydar, S. A. Vandewater, **M. A. Taffe**. Comparison of the potency and efficacy of the novel cathinone α -PPP, α -PVP and pentedrone: self-administration and locomotor stimulation in male and female rats. Neuroscience 2017, Washington DC, 2017
- J.D. Nguyen, Y. Grant, K. Creehan, **M.A. Taffe**. $\Delta 9$ -Tetrahydrocannabinol vapor inhalation attenuates oxycodone self-administration. Society for Neuroscience, Washington DC, November 2017.
- J.D. Nguyen, D. Kirson, M.Q. Steinman, M. Roberto, **M.A. Taffe**. Withdrawal-induced escalation of oxycodone self-administration is mediated by kappa opioid receptor function. Invited oral presentation. Behavioral Pharmacology Society Annual Meeting, San Diego, CA, April 2018.
- M. Javadi-Paydar, **M. A. Taffe**. Hyperlocomotion induced by inhalation of nicotine and a low dose of $\Delta 9$ -Tetrahydrocannabinol in female rats. Experimental Biology, San Diego, CA 2018
- M. A. Taffe**, E. L. Harvey, M. Javadi-Paydar, J. D. Nguyen, Y. Grant, S. A. Vandewater, K. M. Creehan, T. J. Dickerson. Dissecting The Abuse Liability Of Cathinone Derivative Psychomotor Stimulants In Female Rats. Experimental Biology, San Diego, CA 2018

Research Projects

ONGOING

Title: Dissecting the Abuse Liability of Synthetic Cathinone Stimulants

Agency: NIH/NIDA

Type: R01 DA042211

09/30/16 – 06/30/21

The goal of this project is to determine the relative abuse liability of synthetic cathinone psychostimulant drugs in rat models. Our approach is to systematically evaluate the role of the 3,4-methylenedioxy and 4-methyl aromatic ring substitutions, as well as alkyl chain modifications, in altering the efficacy and potency in intravenous self-administration.

Role: Multi-PI (contact)

Title: Prescription Opioid Addiction: Neurobiological Mechanisms

Agency: NIH/NIDA

Type: R01 DA035281

03/01/14 – 02/28/19

The goal is to elucidate the neurobiological systems within specific circuits of the ventral striatum and extended amygdala, which are critical for the motivational aspects of prescription opioid abuse and dependence, and also provide important information for identifying novel non- mu opioid treatments for opioid addiction.

Role: Multi-PI (contact)

Title: Immunopharmacotherapy for Methamphetamine Addiction

Agency: NIH/NIDA

Type: R01 DA024705

08/15/08-05/31/19

The major goal of this project is to evaluate candidate methamphetamine (METH) conjugate vaccines (MCVs) for efficacy in altering METH pharmacokinetics and METH-induced effects on activity, body temperature and heart rate in rats. Further studies will determine if effective MCV vaccination can reduce METH self-administration.

Role: Principal Investigator

TRAINING GRANT

Title: NEUROPSYCHOPHARMACOLOGY - MULTIDISCIPLINARY TRAINING

Agency: NIH/NIAAA

Type: 2 T32 AA007456-35

07/01/17-06/30/22

The purpose of this program is to train promising young scientists at the postdoctoral level in multi-disciplinary strategies of molecular, cellular, behavioral, and clinical neuropsychopharmacology research on substance use disorders. The program is conducted in association with the The Scripps Research Institute Alcohol Research Center but supports training on addictive disorder science related to all major drugs of abuse in addition to the focus on alcohol.

Role: Program Director (since 2016)

COMPLETED

Title: Development of Rodent Self-Administration Vapor Inhalation Chambers for THC

Agency: NIH/NIDA

Type: R44 DA041967

04/01/16 – 03/31/18

The goal of this SBIR Phase II project is to enhance the pace of development and support the eventual commercialization of a self-administration vapor inhalation chamber system for the intrapulmonary delivery to rats of Δ^9 -tetrahydrocannabinol, the primary psychoactive constituent of cannabis.

Role: Consortium PI

Title: Cannabinoid Regulation of Cognition

Agency: NIH/NIDA

Type: R01 DA035482

05/01/13-1/31/18

The major goal of this project is to determine if cannabidiol, a nonpsychoactive constituent of marijuana, can attenuate the detrimental behavioral effects of either acute or chronic exposure to Δ^9 -tetrahydrocannabinol.

Role: Principal Investigator

Title: Determinants of transition states in MDMA self-administration

Agency: NIH/NIDA

Type: R01 DA024105

02/01/11-11/30/15

The major goal of this project was to determine situational contributors to a transition from episodic to compulsive use of 3,4-methylenedioxymethamphetamine (MDMA, "Ecstasy") using rodent models of intravenous self-administration.

Role: Principal Investigator

Title: Behavioral Toxicity of Chronic Alcohol Drinking in Peri-Adolescent Monkeys

Agency: NIH/NIAAA

Type: R01 AA016807

08/10/08-05/31/13

The major goals of this project were to determine the cognitive, behavioral and physiological effects of repeated drinking of alcohol in binge amounts (5 standard drinks in one session) for two years during the adolescent interval. Further studies determined the effects of alcohol discontinuation on behavioral and physiological measures of alcohol withdrawal.

Role: Principal Investigator

Title: Translational Center on the Neurobiology of Cannabis Addiction

Agency: NIH/NIDA

Type: P20 DA024194

09/30/07-06/30/11

The major goal of this Developmental Center was to test the hypothesis that dysregulation of frontal cortical function associated with repeated exposure to cannabinoids impairs executive cognitive function, thereby increasing vulnerability to cannabis dependence. Project #3 was designed to investigate neurochemical, chronophysiological and behavioral correlates of chronic exposure to Δ^9 -THC in peri-adolescent monkeys.

Roles: Co-Center Director; PI-Project #3; Director of Education and Training

Title: Behavioral Toxicity of MDMA in Rhesus Monkeys

Agency: NIH/NIDA

Type: R01 DA018418

04/01/05-03/31/10

The major goals of this project were to determine the cognitive, behavioral and physiological effects of exposure to common recreational, "stacking" and neurotoxic dose regimens of 3,4-methylenedioxymethamphetamine (MDMA, "Ecstasy").

Role: Principal Investigator

Title: Pilot Project- Nonhuman primate model of transition from binge drinking to dependence

Agency: NIH/NAAA

Type: P60 AA06420 (Koob, G.F. Cent Dir)

04/25/08-12/31/09

The goal of this project was to develop a nonhuman primate model for investigating the consequences of repeated alcohol binge drinking. The goals were 1) to determine if acute and chronic alcohol bingeing in periadolescent monkeys alters the concentrations of monoamine, opioid, endocannabinoid, NPY and corticotrophin releasing factor (CRF) markers in cerebrospinal fluid and 2) To determine if chronic alcohol binge drinking in periadolescent monkeys leads to alcohol dependence.

Role: Pilot Project Principal Investigator

Title: Cognitive Effects of Alcohol in Peri-Adolescent Monkeys

Agency: NIH/NIAAA

Type: R21 AA013972

2/05/04-1/31/07

The major goal of this project was to determine if high levels of chronic oral alcohol drinking slow adolescent monkeys' ability to learn a battery of seven behavioral tests focusing on the cognitive domains of learning, memory, attention and motor skill.

Role: Principal Investigator

Title: Gene Therapy for Alzheimer's Disease: Project #4, Gene Therapy in Primates

Agency: NIH/NIA (F.H. Gage, PI; M.H. Tuszynski, PI Project #4)

Type: P01 AG10435-11

09/30/02-

08/31/05

The major goal of Project #4 was to determine if *in vivo* gene transfer of nerve growth factor to the basal forebrain of aged macaques, demonstrated to restore cholinergic tone in the prefrontal cortex, results in amelioration of specific cognitive and behavioral deficits. A second goal was to determine if *in vivo* viral vector delivery of amyloid precursor protein to macaque brain resulted in an improved neuropathologic and behavioral model of Alzheimer's Disease.

Role: Co-Investigator, Project #4

Title: Ethanol Modulation of SIV infection of the CNS

Agency: NIH/NIAAA

Type: R21 AA13836 (H.S. Fox, PI)

09/12/02-07/31/05

The major goal of this project was to determine if high levels of chronic alcohol exposure affected the entry of SIV infected monocytes into the brain during acute infection as well as the effect on CNS viral burden.

Role: Investigator

Title: Scripps NeuroAIDS Preclinical Studies: Behavioral Assessment Core

Agency: NIH/NIMH

Type: P30 MH62261 (H.S. Fox, PI)

10/01/00-08/31/05

The objectives for the Core project were to employ established behavioral test batteries to evaluate neurobehavioral function in murine and simian models of NeuroAIDS.

Role: Principal Investigator, Behavioral Assessment Core

Title: SIV Behavioral Pathology: Manipulation of Viral Load

Agency: NIH/NIMH

Type: R01 MH61692
07/31/05

08/01/01-

The major goals of this project were to determine the relationship between SIV viral burden and behavioral sequelae of disease progression in the SIV/rhesus model of NeuroAIDS. Peri-inoculation treatment with a CD8 specific antibody was employed to elevate viral burden and highly active anti-retroviral drug therapy is employed to rapidly reduce viral burden.

Role: Principal Investigator

Title: Methamphetamine and AIDS: Toxic Interactions in Animals

Agency: NIH/NIDA

Type: P01 DA12444 (S.J. Henriksen, PI; H.S. Fox, PI Project #1)

04/01/00-

03/31/05

The goals of this project were to determine the effects of methamphetamine exposure on disease course, brain function and CNS pathology in the SIV/rhesus model of NeuroAIDS.

Role: Co-Investigator, Project #1

Title: Neuropharmacology of Primate Cognition

Agency: NIH/NIDA

Type: R01 DA13390

09/11/00-06/30/04

The major goals of this project were to determine the contributions of specific cholinergic, dopaminergic, glutamatergic and cannabinoid mechanisms to complex cognition by employing acute drug challenges in behaviorally trained rhesus macaques.

Role: Principal Investigator