Christopher D. Verrico, Ph. D.

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I. General Biographical Information

A. Personal

- 1. Name: Christopher David Verrico, Ph. D.
- 2. Citizenship: U.S.A.
- **3.** Education: (include institution/location, degree, and dates of attendance)
 - 1. Undergraduate Education:
 - a. University of Pittsburgh/Pittsburgh, PA, B.S. (Honors in Neuroscience), 1991-1995
 - **2.** Medical Education or Graduate Education (with thesis/dissertation title, advisor):
 - Yale University School of Medicine/New Haven, CT., Ph. D., 1996-2002 (Cannabinoid Induced Cognitive Impairment: A Role for Prefrontal Dopamine and Acetylcholine, Robert H. Roth Ph. D.)
 - **3.** Postgraduate Training: residency, fellowship (clinical or research), with source of support and advisor, if relevant.
 - a. Postdoctoral Fellow in Psychiatry, Yale University School of Medicine, 2002-2003, R01 DA011717-05, "Antipsychotic Drugs and Control of Dopaminergic Neurons", PI – Robert H. Roth, National Institute of Mental Health.
 - Postdoctoral Fellow in Psychiatry, Harvard Medical School-New England Primate Research Center, 2003-2005, P51
 RR000168-45, 2006-2007, "Antagonism of MDMA-Induced Impairment in Primates by a NET Inhibitor ", PI Bertha K. Madras, National Center for Research Resources.
 - c. Postdoctoral Fellow at the Center for the Neural Basis of Cognition, Carnegie Mellon University, 2005-2006, T32 MH018273-20S1, "Training in the Neurobiology of Psychiatric Disorders", PI – Michael J. Zigmond, National Institute of Mental Health.
 - d. Postdoctoral Fellow in Psychiatry, University of Pittsburgh School of Medicine- Translational Neuroscience Program, 2006-2010, R01 DA023109-03, "Cannabis and Adolescent Brain Development", PI – David A. Lewis, National Institute on Drug Abuse.

B. Academic Appointments: (with institution, title and dates of appointment)

- **1.** Current faculty position(s):
 - Baylor College of Medicine-Menninger Department of Psychiatry and Behavioral Sciences, Assistant Professor, November 2011-present
- **2.** Previous faculty position(s) at other institutions:
 - a. University of Pittsburgh- Department of Psychiatry, Assistant Professor, July-November, 2011
- 3. Current courtesy faculty appointments at other institutions: N/A

C. Other advanced training/experience: (with locations, dates and sources of support)

- 1. Formal Sabbatic leave: N/A
- 2. Other specialized training following academic appointment: N/A

D. Other information

- 1. Honors or Awards: titles, dates
 - a. Graduated Cum Laude, Department of Neuroscience, University of Pittsburgh, 1995
 - b. New England Pharmacologist, SmithKline Beecham Pharmacology Award, 1997
 - Cold Spring Harbor, Molecular Mechanisms of Addiction Award, 2003
 - d. College on the Problems of Drug Dependence, Early Career Investigator Award, 2004
 - e. Carnegie Mellon University, National Research Service Award-Postdoctoral Fellowship, 2005
 - f. American College of Neuropsychopharmacology, Young Investigator Memorial Travel Award, 2012
- 2. Board Eligibility/Certification: N/A
- **3.** Other non-academic positions: (with locations, titles, dates of employment)
 - a. Sanofi-Aventis Pharmaceuticals, Department of Psychopharmacology, Lead Research Scientist, 2006
 - b. University of Pittsburgh, Department of Psychiatry, Senior Research Principal, 2010-2011
 - The American Physiological Society, Science Writer, 2004present

II. Research Information

A. Research Support

- **1.** For each Project
 - **a.** Exercise as a Behavioral Treatment for Cannabis Dependence
 - a. Baylor College of Medicine, Faculty Seed Funding
 - b. PI
 - c. 2013-2014
 - d. \$30,000
 - e. Grant
 - **b.** Clinical Research Education for Drug Abuse Professionals
 - a. National Institute on Drug Abuse
 - b. Co-I
 - c. 2011-2016
 - d. \$247,341/year
 - e. Grant
- 2. Indicate what support, if any, would be transferred to BCM: N/A

B. National Scientific Participation: (include dates and titles)

- **1.** Journal editorial boards, etc.
 - a. Ad hoc Reviewer:
 - i. Neuropsychopharmacology
 - ii. Pharmacology, Biochemistry and Behavior
 - iii. Psychopharmacology
 - iv. Neurobiology of Disease
 - v. AGE: Journal of the American Aging Association
- 2. Review panels, etc.: N/A

- 3. Professional societies etc.:
 - a. 2009-present; 1998-2006, Society for Neuroscience
 - b. 2004-present, The American Physiological Society
 - c. 2004-2005, Harvard National Postdoctoral Association (Charter Member)
 - d. 2003, Yale National Postdoctoral Association (Executive Board Member)
 - e. 2002, Yale National Postdoctoral Association
 - f. 2001-2003, Yale Biotechnology Student Interest Group
 - g. 1994-1995, Sigma Xi National Honor Society
- **4.** Invited lectures, presentations, research seminars: National, International
 - a. 2004, "High Affinity of MDMA for the Norepinephrine Transporter; Relevance to Cognitive Dysfunction", College on the Problems of Drug Dependence, San Juan, Puerto Rico
 - 2003, "Is the Selective Neurotoxicity of MDMA on Serotonin Neurons Predicted by its Affinity for the Transporter?", Cold Spring Harbor, Laurel Hollow, NY

C. Publications:

(usual bibliographic form for discipline: include dates and beginning and ending page numbers)

- **1.** Full papers:
 - a. Fernstrom MH, Verrico CD, Ebaugh AL, Fernstrom JD. (1996) Diet-induced changes in serum cholesterol concentrations do not alter tryptophan hydroxylation rate or serotonin concentrations in gerbil brain. Life Sciences. 58:1433-44. PMID:8622569
 - b. George TP, Verrico CD, Roth RH. (1998) Effects of repeated nicotine pre-treatment on mesoprefrontal dopaminergic and behavioral responses to acute footshock stress. Brain Research. 801:36-49. PMID:9729261
 - c. Jentsch JD, Verrico CD, Le D, Roth RH. (1998) Repeated exposure to delta 9-tetrahydrocannabinol reduces prefrontal cortical dopamine metabolism in the rat. Neuroscience Letters. 246:169-72. PMID:9792619
 - d. Jentsch JD, Dazzi L, Chhatwal JP, Verrico CD, Roth RH. (1998) Reduced prefrontal cortical dopamine, but not acetylcholine, release in vivo after repeated, intermittent phencyclidine administration to rats. Neuroscience Letters. 258: 175-8. PMID:9885959
 - e. George TP, Verrico CD, Xu L, Roth RH. (2000) Effects of repeated nicotine administration and footshock stress on rat mesoprefrontal dopamine systems: Evidence for opioid mechanisms. Neuropsychopharmacology. 23:79-88. PMID:10869888
 - f. George TP, Verrico CD, Picciotto MR, Roth RH. (2000) Nicotinic modulation of mesoprefrontal dopamine neurons: pharmacologic and neuroanatomic characterization. Journal of Pharmacology and Experimental Therapeutics. 295:58-66. PMID:10991961
 - g. George TP, Picciotto MR, Verrico CD, Roth RH. (2001) Effects of nicotine pretreatment on dopaminergic and behavioral responses to conditioned fear stress in rats: dissociation of

- biochemical and behavioral effects. Biological Psychiatry. 49:300-6. PMID:11230881
- h. De La Garza R 2nd, Jentsch JD, Verrico CD, Roth RH. (2002) Adaptation of monoaminergic responses to phencyclidine in nucleus accumbens and prefrontal cortex following repeated treatment with fluoxetine or imipramine. Brain Research. 958:20-7. PMID:12468026
- Verrico CD, Jentsch JD, Dazzi L, Roth RH. (2003) Systemic, but not local, administration of cannabinoid CB1 receptor agonists modulate prefrontal cortical acetylcholine efflux in the rat. Synapse. 48:178-83. PMID:12687636
- j. Verrico CD, Jentsch JD, Roth RH. (2003) Persistent and anatomically selective reduction in prefrontal cortical dopamine metabolism after repeated, intermittent cannabinoid administration to rats. Synapse. 49:61-6. PMID:12710016
- k. Verrico CD, Jentsch JD, Roth RH, Taylor JR. (2004) Repeated, intermittent delta(9)-tetrahydrocannabinol administration to rats impairs acquisition and performance of a test of visuospatial divided attention. Neuropsychopharmacology. 29:522-9. PMID:14694348
- Miller GM, Verrico CD, Jassen A, Konar M, Yang H, Panas H, Bahn M, Johnson R, Madras BK. (2005) Primate trace amine receptor 1 modulation by the dopamine transporter. Journal of Pharmacology and Experimental Therapeutics. 313:983-94. PMID:15764732
- m. Verrico CD, Miller GM, Madras BK. (2007) MDMA (Ecstasy) and human dopamine, norepinephrine, and serotonin transporters: implications for MDMA-induced neurotoxicity and treatment. Psychopharmacology. 189:489-503. PMID:16220332
- n. Verrico CD, Lynch L, Fahey MA, Fryer AK, Miller GM, Madras BK. (2008) MDMA-induced impairment in primates: antagonism by a selective norepinephrine or serotonin, but not by a dopamine/norepinephrine transport inhibitor. Journal of Psychopharmacology. 22:187-202. PMID:18308800
- Eggan SM, Stoyak SR, Verrico CD, Lewis DA. (2010)
 Cannabinoid CB1 receptor immunoreactivity in the prefrontal cortex: Comparison of schizophrenia and major depressive disorder. Neuropsychopharmacology. 35:2060-71.

 PMID:20555313
- p. Verrico CD, Liu S, Asafu-Adjei JK, Sampson AR, Bradberry CW, Lewis DA. (2011) Acquisition and baseline performance of working memory tasks by adolescent rhesus monkeys. Brain Research. 1378:91-104. PMID:21215729
- q. Verrico CD, Liu S, Bitler EJ, Gu H, Sampson AR, Bradberry CW, Lewis DA. (2012) Delay- and dose-dependent effects of $\Delta 9$ -tetrahydrocannabinol administration on spatial and object working memory tasks in adolescent rhesus monkeys. Neuropsychopharmacology. 37:1357-66. PMID:22218091
- 2. Other full papers: N/A
- **3.** Abstracts given during last three years
 - a. Verrico CD, Peterson ML and Lewis DA. Effects of chronic delta-9-tetrahydrocannabinol administration on working memory performance in adolescent rhesus monkeys. Society for

- Neuroscience, Program No. 200.13, 2010
- b. Verrico CD and Lewis DA. Selective effects of long-term delta9tetrahydrocannabinol administration on spatial working memory performance in adolescent rhesus monkeys. American College of Neuropsychopharmacology, 69:1285, 2010
- c. Glausier JR, McClement LM, Verrico CD and Lewis DA. The effect of long-term exposure to delta9-tetrahydrocannabinol on prefrontal cortical cannabinoid receptor 1 mRNA and protein levels. Society for Neuroscience, Program No. 911.07, 2011
- d. Verrico CD and Lewis DA. Long-term exposure of adolescent monkeys to $\Delta 9$ -tetrahydrocannabinol selectively and persistently impairs spatial working memory. Society for Neuroscience, Program No. 911.08, 2011
- e. Miyamae T, Pafundo DE, Verrico CD, Gonzalez-Burgos G and Lewis DA. Cannabis exposure during primate adolescence: Effects on GABAA-receptor mediated inhibition in prefrontal cortex. Society for Neuroscience, Program No. 911.09, 2011
- f. Glausier JR, McClement LM, Curley AA, Verrico CD and Lewis DA. The effect of long-term exposure to delta9-tetrahydrocannabinol on prefrontal cortical cannabinoid receptor 1 mRNA and protein levels. Society of Biological Psychiatry, Session No. 026.01, May, 2012
- g. Verrico CD, Newton TF, Meyer SA, and De La Garza II R. The impact of marijuana use on high and desire for cocaine in cocaine-dependent individuals. To be presented at the annual meeting of the College on Problems of Drug Dependence, Palm Springs, CA, June, 2012.
- 4. Books: N/A
- **5.** Other works communicating research results to scientific colleagues: N/A
- 6. Other works communicating research results to general public: N/A

III. Teaching Information

A. Didactic course work

- 1. Courses taught at current institution: N/A
- **2.** Courses taught at other institutions (include number of hours):
 - **a.** 2009 (May-June), Co-instructor of Drugs and Behavior (NROSCI 0081-2097), University of Pittsburgh
 - **b.** 2009 (January-April), Instructor of Drugs and Behavior (NROSCI 0081-2094), University of Pittsburgh
 - **c.** 2007 (August-December), Instructor of Brain and Behavior (NROSCI 0080-7010), University of Pittsburgh
- **3.** Courses expected to be taught at BCM:

B. Non-didactic teaching

- **1.** Resident training: 2012, "Neurobiology of Cannabis Addiction", 2-hour course for Baylor College of Medicine PGY1 Psychiatry residents
- 2. Clinical Fellow training: (include names of fellows, dates, current location): N/A
- **3.** Research Fellow training: (as above): N/A
- **4.** Graduate Student training: (as above; major advisor, committee member): N/A
- **5.** Estimate of kinds of non-didactic teaching expected at BCM: As requested

C. Lectures: (include location, title of presentation, dates)

- **1.** International:
- **2.** National:
- **3.** Regional:
 - a. Menninger Department of Psychiatry & Behavioral Sciences at the Baylor College of Medicine, Houston, TX, "Chronic Administration of THC to Adolescent Rhesus Monkeys Selectively Impairs Spatial Working Memory; Translating Findings into Cannabis Dependence Research in Humans", 2011
 - Department of Psychopharmacology at Sanofi-Aventis Pharmaceuticals, Bridgewater, NJ, "Assessing Compound Efficacy for Improving Working Memory in Nonhuman Primates", 2005
 - c. Center for the Neural Basis of Cognition at Carnegie Mellon University, Pittsburgh, PA, "MDMA Impairs Reversal Learning in Nonhuman Primates", 2004
 - d. Division of Neurochemistry at the Harvard Medical School-New England Primate Research Center, Southborough, MA, "THC-Induced Attentional Impairments, Reversal with a Stimulant", 2002
 - e. Department of Psychology at The Ohio State University, Columbus, OH, "Cannabinoids and the Prefrontal Cortex; the Significance of Sustained Dopamine Depletion", 2001
- **4.** Local:
 - a. Community College of Allegheny County-Boyce, Pittsburgh, PA, "Ecstasy (MDMA): Fact and Fiction", 2006
 - b. Community College of Allegheny County-Boyce, Pittsburgh, PA, "Ecstasy (MDMA): Fact and Fiction", 2005
- D. Visiting professorships (include location, dates): N/A

IV. Medical & Service Information

- A. Patient care responsibilities: N/A
 - 1. Department-wide
 - **2.** Section or specialty
 - a.
 - b.
 - c.
- **B.** Clinical laboratory responsibilities
- C. National education or voluntary health organization participation
- D. Administrative assignments
 - **1.** Department administration, committees, etc.
 - **2.** College, School or University administration, committees, etc.
- F. Other pertinent information not given above