



R. Christopher Pierce, Ph.D.
Curriculum Vitae
May, 2011



Work Address and Phone Numbers

Center for Neurobiology and Behavior
Department of Psychiatry
University of Pennsylvania School of Medicine
125 South 31st Street
Philadelphia, PA 19104-3403

Office: (215) 746-8915
Lab: (215) 573-5202/5204
FAX: (215) 573-2041
e-mail: rcpierce@mail.med.upenn.edu

Personal Information

Date and Place of Birth: 21 November 1966 (Somerset, KY)
Web Site: <http://www.piercelab.org>

Education

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|-------|------|---|
| Ph.D. | 1993 | Indiana University, Bloomington, IN (Neuroscience and Psychology) |
| B.A. | 1988 | University of Kentucky, Lexington, KY (Psychology) |

Professional Experience

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|----------------|---|
| 2008 - present | Associate Professor (with tenure) of Neuroscience, Department of Psychiatry University of Pennsylvania School of Medicine |
| 2008 | Visiting Scientist, Rudolf Magnus Neuroscience Institute, University of Utrecht, The Netherlands |
| 2008 | Professor, Departments of Pharmacology and Psychiatry Boston University School of Medicine |
| 2003 - 2008 | Associate Professor, Departments of Pharmacology and Psychiatry Boston University School of Medicine |
| 1997 - 2003 | Assistant Professor, Departments of Pharmacology and Psychiatry Boston University School of Medicine |
| 1995 - 1997 | Research Assistant Professor, Department of Veterinary Comparative Anatomy, Pharmacology and Physiology, Washington State University |
| 1993 - 1995 | Postdoctoral Fellow, Alcohol and Drug Abuse Program, Washington State University, Dr. Peter W. Kalivas, advisor |
| 1989 - 1993 | Graduate Studies, Department of Psychology/Program in Neural Science, Indiana University, Dr. George V. Rebec, advisor |
| 1988 - 1989 | Statistical Consultant/Laboratory Technician, Forestry Department, University of Kentucky, Dr. David Wagner, supervisor |
| 1987 - 1988 | Laboratory Technician, Psychology Department, University of Kentucky Dr. Michael Bardo, supervisor |
| 1985 - 1987 | Assistant Director, Standardbred Development Fund Kentucky Harness Racing Commission |

Consulting

Scientific Consultant for Cocaine Addiction Pharmacotherapy, NIDA (Nora Volkow, director)
Scientific advisor, SimBiotic Software (Ithaca, NY - makers of GeneBeaker educational software)

Grants and Awards

Active

K02 DA18678, R.C. Pierce (PI) 4/01/06-03/31/16

NIH/NIDA "Psychostimulant-induced craving and toxicity"

Approximately \$1,200,000 total costs

This independent scientist award provides salary support for the PI.

R01 DA15214, R.C. Pierce (PI) 2/10/03-1/31/13

NIH/NIDA "mPFC, N. Accumbens and Reinstatement of Cocaine Seeking"

Approximately \$3,000,000 total costs

The major goal of this project is to assess the roles of dopamine and glutamate in the medial prefrontal cortex and nucleus accumbens in the reinstatement of cocaine-seeking behavior in rats.

Supplement to DA15214 (\$50,000 direct costs for 2009-2010) funded under the auspices of the U.S.–Netherlands Binational Research Collaboration on Drug Abuse and Addiction. Dutch collaborator: Louk Vanderschuren from the University of Utrecht.

R01 DA22339, R.C. Pierce (PI) 5/15/08-4/30/13

NIH/NIDA "D1 Dopamine Receptor Signaling and Cocaine Reinstatement"

Approximately \$1,800,000 total costs.

The major goal of this project is to assess influences of dopamine receptor signaling on glutamate transmission in the nucleus accumbens during the reinstatement of cocaine seeking.

T32 DA28874, R.C. Pierce and A.R. Childress (co-PIs) 7/01/2010-6/30/2012

NIH/NIDA "Translational Addiction Research Fellowship"

Approximately \$366,500 total costs.

This is a pre- and post-doctoral training grant focused on translational addiction research.

K01 DA30445, Schmidt (PI) 9/15/2010-5/31/2015

Epigenetics and Incubation of Craving

Approximately \$683,000 total costs.

The mentored award focuses on the epigenetic mechanisms underlying the increases in BDNF transcription associated with the incubation of cocaine craving.

Role: Mentor

F31 DA31535, White (PI) 5/01/2011-4/30/2014

Cocaine Reinstatement and AMPA Receptor Trafficking

Approximately \$124,000 total costs.

This NRSA focuses on the role of AMPA glutamate receptors in an animal model of cocaine craving.

Role: Mentor

Inactive Grants and Awards

F30 DA14205, K. Famous (PI) 7/01/05-5/31/10
NIH/NIDA "Nucleus Accumbens Glutamate and Cocaine Reinstatement"
\$213,993 total costs (R.C. Pierce, Mentor)
This grant was a pre-doctoral National Research Service Award for MD/PhD students.

R01 DA16866, B.K. Yamamoto (PI) 5/01/03-7/01/07
NIH/NIDA "Chronic Stress and MDMA Neurotoxicity"
\$1,128,554 total costs (R.C. Pierce, co-Investigator)
The major goal of this project is to assess the possible synergistic interactions between prior MDMA exposure and chronic stress and to assess the influence of these variables on subsequent drug self-administration.

R03 DA17166, R.C. Pierce (PI) 3/01/05-2/28/07
NIH/NIDA "Ephrins and Repeated Cocaine"
\$161,500 total costs
This project focused on the effects of cocaine self-administration on the expression of ephrins and Eph receptors in the nucleus accumbens

F31 DA16824, H.D. Schmidt (PI) 8/01/03-7/31/06
NIH/NIDA NRSA "Eph Receptors and Behavioral Sensitization to Cocaine"
\$129,742 total costs (R.C. Pierce, Mentor)
This grant was a pre-doctoral National Research Service Award for PhD students.

R01 NS40783, J.-J. Soghomonian (PI) 3/01/02-1/01/06
NIH/NINCDS "Behavioral Sensitization and Parkinson's Disease"
\$1,092,500 total costs (R.C. Pierce, co-Investigator)
The major goal of this project was to assess the roles of GABA and serotonin in behavioral sensitization to L-DOPA in the 6-OHDA model of Parkinson's disease.

R01 DA13724, D.H. Farb (PI) 5/01/02-4/30/05
NIH/NIDA "Neuroactive Steroids, Dopamine and Cocaine Sensitization"
\$777,125 total costs (R.C. Pierce, co-Principal Investigator)
The major goal of this project was to assess the influence of neuroactive steroids that modulate ionotropic glutamate receptors on dopamine-mediated neurotransmission and behavior.

F31 DA15263, S.M. Anderson (PI) 4/01/02-8/01/05
NIH/NIDA "Role of the mPFC in Reinstatement of Drug Seeking"
\$107,151 total costs (R.C. Pierce, Mentor)
This grant was a pre-doctoral National Research Service Award for PhD students.

F30 DA14205, A.A. Bari (PI) 1/01/01-1/01/07
NIH/NIDA "Role of the mPFC in Reinstatement of Drug Seeking"
\$212,681 total costs (R.C. Pierce, Mentor)
This grant was a pre-doctoral National Research Service Award for MD/PhD students.

Inactive Grants and Awards cont.

R01 DA12171, R.C. Pierce (PI) 9/30/99-7/31/03

NIH/NIDA "Neurotrophins and Repeated Cocaine"

\$708,285 total costs

The major goal of this project was to assess the role of NT-3 and related second messengers in the behavioral and neuronal plasticity resulting from repeated cocaine injections.

F31 DA14435, S.C. Licata (PI) 7/02/01-5/31/03

NIH/NIDA "The Role of Calcium in Cocaine-Induced Sensitization"

\$92,420 total costs (R.C. Pierce, Mentor)

This grant was a pre-doctoral National Research Service Award for PhD students.

Minority Supplement, A.Y. Freeman 7/01/01-6/30/02

NIH/NIDA

\$17,300 total costs (R.C. Pierce, Mentor)

This was a minority graduate student supplement grant.

New Investigator Award, R.C. Pierce (PI) 10/01/99-9/30/01

The Medical Foundation (Harcourt Charitable Foundation)

\$100,000 total costs "Neurotrophins and Cocaine Addiction"

The major goal of this project was to assess the effects of neurotrophin-induced plasticity in the mesolimbic dopamine system on cocaine self-administration in rats.

R03 DA11168, R.C. Pierce (PI) 8/05/97-10/30/99

NIH/NIDA "Dopamine, Calcium and Repeated Cocaine"

\$154,341 total costs

The major goal of this project was to assess the role of calcium and calcium-stimulated second messengers in the initiation of behavioral sensitization to cocaine.

Young Investigator Award, R.C. Pierce (PI) 7/15/99-7/14/01

National Alliance for Research on Schizophrenia and Depression

\$60,000 total costs "The Role of Calcium in Behavioral Sensitization to Cocaine"

The major goal of this project was to assess the role of L-type calcium channels in the enhanced accumbal dopamine release observed in cocaine-sensitized rats.

Young Investigator Award, R.C. Pierce (PI) 7/15/97-7/14/99

National Alliance for Research on Schizophrenia and Depression

\$60,000 total costs "The Role of Calcium in Behavioral Sensitization to Cocaine"

The major goal of this project was to assess the role of L-type calcium channels in the enhanced accumbal dopamine release observed in cocaine sensitized rats.

Washington State Alcohol and Drug Abuse Grant Support Program

R.C. Pierce (PI) 1/01/96-12/31/96

\$22,600 total direct costs

"The Role of Excitatory Amino Acids in Cocaine Self-Administration Behavior in Rats"

Role: PI

Inactive Grants and Awards cont.

DA05589, R.C. Pierce (PI) 10/01/93-9/30/96
NIH/NIDA "Neurobiology of Cocaine-Induced Behavioral Sensitization"
\$72,900 total direct costs
NRSA Postdoctoral Research Fellowship (Peter Kalivas, Mentor)

Honors and Awards

- 2008 Jacob P. Waletzky Memorial Award for Innovative Research in Drug Addiction and Alcoholism, Society for Neuroscience (\$25,000 honorarium)
- 2006 Joseph Cochin Young Investigator Award, College on Problems of Drug Dependence (\$1,500 honorarium)
- 2006 NIDA Independent Scientist Award (K02 Research Career Development Award)
- 2001 Hall of Fame, Western Hills High School, Frankfort, KY.
- 1997 Travel Award, 1997 College on Problems in Drug Dependence meeting in Nashville, TN (\$750 travel award).
- 1995 NIDA Director's Travel Award for the 1995 College on Problems in Drug Dependence meeting in Scottsdale, AZ (\$750 travel award).
- 1992 J. Stewart and Dagmar K. Riley Dissertation Year Fellowship (\$10,000 fellowship awarded to the outstanding student in the Indiana University Graduate School).
- 1991 Omnitech Travel Fellowship (\$150 for the Society for Neuroscience meeting in New Orleans).
- 1991 Research Commendation, Indiana University Psychology Department.
- 1988 Graduate with Distinction, University of Kentucky College of Arts and Sciences.
- 1988 Graduate with Honors, University of Kentucky Department of Psychology.
- 1988 University of Kentucky Oswald Research and Creativity Scholarship (\$150).
- 1988 University of Kentucky Phi Beta Kappa Scholarly Research Award (\$750).
- 1988 Griffin Award (outstanding presentation - \$100), Kentucky Academy of Sciences.
- 1987 Sigma Xi (Scientific Research Honor Society)
- 1987 Omicron Delta Kappa (Leadership Honor Society)
- 1986 Psi Chi (Psychology Honor Society)

Community Outreach

- 5/06/08 Laboratory tour and presentation outlining animal models of addiction for underprivileged high school students from South Boston.
 - 1/23/03 P. O'Donnell (organizer), R.C. Pierce, G. Hanson, K. Anstrom, W. Carlezon, K. Frantz, M. Laruelle, M. Picciotto. Town meeting in Sandy, UT associated with the Winter Conference on Brain Research. *Drug abuse – morality versus medicine: a proper perspective.*
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Editorial Activities

Advisory Editor, Behavioral Pharmacology in Laboratory Animals

Psychopharmacology (2009 – present)

Editorial boards

European Journal of Pharmacology (2008 – present)

Neuropsychopharmacology (2009 – present)

Ad hoc referee

American Journal of Physiology

Archives of General Psychiatry

Behavioral Neuroscience

Behavioural Pharmacology

Behavioural Brain Research

Biochemical Pharmacology

Biological Psychiatry

Brain Research

Brain Structure and Function

Cellular and Molecular Life Sciences

Chemical Reviews

Circulation Research

Clinical Neuropharmacology

CNS & Neurological Disorders-Drug
Targets

European Journal of Neuroscience

European Neuropsycho-
pharmacology

Experimental Brain Research

Inflammation Research

Journal of Neurochemistry

Journal of Neurophysiology

Journal of Neuroscience

Journal of Neuroscience Methods

Journal of Pharmacology and
Experimental Therapeutics

Learning & Memory

Neuroscience

Neuropharmacology

Neuropsychopharmacology

Neurotoxicity Research

Parkinsonism & Related Disorders

Peptides

Pharmacology, Biochemistry and Behavior

Physiology and Behavior

PLoS Biology

Proceedings of the National Academy of Science
(USA)

Progress in Molecular Biology and Translational
Science

Progress in Neuro-Psychopharmacology & Biological
Psychiatry

Psychopharmacology

Synapse

Trends in Neuroscience

Memberships in Scientific Organizations and Committee Service

College on Problems of Drug Dependence (2004-present)
Awards Committee (2005-2008)
European Behavioural Pharmacology Society (2005-present)
Society for Neuroscience, USA (1989-present)

Grant Review

Regular Member, NIH Study Section

Molecular Neuropharmacology and Signaling (MNPS) 2008 – 2012
Associate Chair (2009-2010)

Temporary Member, NIH Study Sections

Molecular Neuropharmacology and Signaling (MNPS)
Biobehavioral Regulation, Learning and Ethology (BRLE)
Biobehavioral and Behavioral Processes-1 (BBBP-1)
Training and Career Development Subcommittee (NIDA-K)

NIH Special Emphasis Panels

Extinction and Pharmacotherapies for Drug Addiction
NIDA Program Projects
Neurobiology of Substance Abuse Behavior (ZRG1 NNB 04)
Scientific Review Group for Program Projects (ZDA1 KXA-N 22 P)
Behavioral Science Track Awards for Rapid Transition (ZDA1 JXP-R31)
Special Emphasis Panel (ZRG1 IFCN-A)
Cutting-Edge Basic Research Awards (CEBRA)

Non-NIH

The Netherlands Organisation for Health Research and Development (ZonMw)
New York University Intramural Grant Program
Veterans Administration (USA)
Medical Research Council (United Kingdom)
Royal Society of New Zealand Centres of Research Excellence Fund
Innovative Research Incentives Scheme, Netherlands Organisation for Scientific Research
European Science Foundation

Administrative Service

University of Pennsylvania

Neuroscience Graduate Group Admissions Committee (2009 – present)

Chair, Neuroscience Graduate Group Rotation Talks (2009 – 2010)

Boston University

Chair of Steering Committee, Interdepartmental Program in Biomedical Neuroscience (2002 – 2004)

Executive Committee, Interdepartmental Program in Biomedical Neuroscience (2002 – 2004)

Medical School Laboratory Animal Science Center User Committee (2006 – 2008)

Medical School Committee on Curriculum Reform (Vertical Integration) (2005 - 2006)

Medical School Curriculum Committee (1999 - 2003)

Medical School Committee on Training in the Responsible Conduct of Research (2001 - 2003)

Department of Pharmacology Graduate Education Committee (2001 - 2008)

Department of Pharmacology Awards Committee (2001 - 2008)

Department of Pharmacology Space Committee (2001 - 2003)

Steering Committee, Program in Neuroscience (2005 - 2008)

Science Day Awards Committee (2000, 2001, 2004)

Other

Neuroscience representative, Indiana University Graduate Student Organization; 1991-1993.

Undergraduate representative on the University of Kentucky Psychology Department Chair Search Committee; 1988.

Thesis Advisees

Doctoral

Antoinette Y. Freeman (PhD, 2002) "The role of endogenous BDNF and NT-3 in cocaine-induced behavioral sensitization: an immunohistochemical and behavioral analysis"

Honors/Awards: NIDA Minority Student Fellowship.

Current position: Assistant Professor, Huston-Tillotson University (Austen, TX).

Stephanie C. Licata (PhD, 2003) "Neurochemical mechanisms within the mesolimbic dopamine system of sensitization to the locomotor-stimulating effect of cocaine in rodents"

Honors/Awards: NIDA NRSA predoctoral fellowship, Russek Student Achievement Award.

Current position: Assistant Professor of Psychiatry, McLean Hospital, Harvard Medical School (Belmont, MA)

Ghazaleh Sadri-Vakili (PhD, 2003) "Neurosteroids modulate ionotropic glutamate receptor-induced dopamine release and locomotor activity in the rat"

Student advised jointly by Chris Pierce and David Farb.

Current position: Instructor of Neurology, Massachusetts General Hospital, Harvard Medical School (Charlestown, MA)

Ausaf A. Bari (PhD, 2004) "The role of nucleus accumbens glutamate and dopamine receptors in cocaine reward" (completing the PhD portion of the combined MD-PhD degree).

Honors/Awards: NIDA NRSA predoctoral fellowship; American Academy of Neurology research scholarship; Wotiz family MD/PhD fellowship; Norris Cotton graduate student award, 31st Annual New England Pharmacologists meeting, Russek Student Achievement Award (second place).

Current position: Resident in Neurosurgery, UCLA.

Sharon M. Anderson (PhD, 2005) "The role of dopamine receptor signaling in the rat nucleus accumbens in cocaine-induced reinstatement"

Honors/Awards: NIDA NRSA predoctoral fellowship, Russek Student Achievement Award.

Current position: Maternity leave

Heath Schmidt (PhD, 2006) "The neuronal circuitry underlying the reinstatement of cocaine-seeking behavior in rats"

Honors/Awards: NIDA NRSA predoctoral fellowship, Russek Student Achievement Award.

Current position: Research Associate in Psychiatry, University of Pennsylvania School of Medicine (Philadelphia, PA)

Katie Famous (PhD, 2007; MD, 2010) "The contributions of ionotropic glutamate receptors and CaMKII to the reinstatement of cocaine-seeking behavior in rats"

Honors/Awards: NIDA NRSA predoctoral fellowship, Russek Student Achievement Award.

Current position: Resident in Internal Medicine, Massachusetts General Hospital

Fair Vassoler (current)

Samantha White (current)

Advisees continuedMasters

Ausaf A. Bari (MA, 1999) "Increases in N-type calcium channel mRNA in the ventral tegmental area contribute to behavioral sensitization to cocaine"

Current position: Resident in Neurosurgery, UCLA.

Arthur R. Jey (MA, 2001) "An investigation into cortico-accumbal projections and their effect on reinstatement of cocaine seeking behavior"

Current position: Resident in Surgery, University of Rochester (Rochester, NY)

Justin Dunn (MA, 2003) "The role of ionotropic glutamate receptors in the initiation of behavioral sensitization to cocaine"

Current position: Resident in Internal Medicine, Johns Hopkins University (Baltimore, MD)

Brian Inderwies (MA, 2004) ""

Current position: Operations Analyst, Silverlink Communications, Inc.

Natasha D'Agostini (MA, 2006) "Elevated levels of forebrain alpha CaM-KII in the acquisition and maintenance of cocaine self-administration in mice"

Current position: Medical student

Prianka Chawla (MA, 2007) "The role of brain-derived neurotrophic factor on the medial prefrontal cortex in cocaine seeking"

Current position: Medical student, Drexel University

Undergraduate

Tino Hyuhn (BS, 2002). Honors/Awards: Undergraduate Research Opportunities Program award.

Delia Silva (Undergraduate honors in Chemistry, 2004)

Christina Ferrari (Undergraduate honors in Biology, 2004)

Judy Yee (BS, 2007). Honors/Awards: Undergraduate Research Opportunities Program research award.

Menglu Yan (BS, 2008). Honors/Awards: Undergraduate Research Opportunities Program research award.

Thomas Hopkins (current)

Michael McMullen (current)

Post-Doctoral Fellows:

Woo-Kyu Park (2000-2001).

Current position: Senior Research Scientist, Pharmaceutical Screening Research Team, Korea Research Institute of Chemical Technology.

Ruth Reeves (2003-2004).

Current position: Safety Pharmacologist at Sepracor, Inc.

Honors/awards: NIDA post-doctoral fellowship.

Vidhya Kumaresan (2004-2008).

Current position: Research Assistant Professor, Department of Pharmacology, Boston University School of Medicine

Lisa Briand (current, supervised jointly with Dr. Julie Blendy).

Research Associates (junior faculty):

Heath Schmidt (2008 – present)

Pavel Ortinski (2009 – present)

Thesis Committee Memberships:

Julie Onton (PhD in Neuroscience, 2001) Tufts University School of Medicine, Ronald Hammer, advisor.

Mark Todtenkopf (PhD in Psychology, 2001) Northeastern University, James Stellar, advisor.

Heather Murray (PhD in Pharmacology, 2002) BUSM, Kevin Jarrel, advisor (RCP committee chair).

Janine Steiger (PhD in Pharmacology, 2002) BUSM, Shelley Russek/David Farb, advisors.

William Donohue (PhD in Pharmacology, 2003) BUSM, Kevin Jarrel, advisor (RCP committee chair).

Mathew Jones (PhD in Pharmacology, 2003) BUSM, Katya Ravid, advisor (RCP committee chair).

Yolanda Black (PhD in Psychology, 2003) Boston University, Kathleen Kantak, advisor.

Kirsten Neilsen (PhD in Anatomy and Neurobiology 2004) Boston University School of Medicine, Jean-Jacques Soghomonian, advisor

Andrew Long (PhD in Pharmacology 2005) BUSM, Clive Wood, advisor (RCP committee chair)

Lori Fitz (PhD in Pharmacology 2005) Boston University School of Medicine, Clive Wood, advisor

Barbara Thompson (PhD in Psychology, 2006) Boston University, John Cherry, advisor

Nina Di Pietro (PhD in Psychology 2006) Boston University, Kathleen Kantak, advisor

Herbert Covington (PhD in Psychology 2006) Tufts University, Klaus Miczek, advisor

Ed Lavalley (PhD in Pharmacology 2006) Boston University School of Medicine

Theo Hadjipetros (PhD in Pharmacology 2007) BUSM, Bryan Yamamoto, advisor

Karla Mark (PhD in Pharmacology 2007) BUSM, Bryan Yamamoto, advisor

Amy Janes (PhD in Psychology 2007) Boston University, James Cherry, advisor

David Eyerman (PhD in Pharmacology 2007) BUSM, Bryan Yamamoto, advisor

Noriko Yamamoto (PhD in Anatomy and Neurobiology 2007) BUSM, J.-J. Soghomonian, advisor

Jamie Raudensky (PhD in Pharmacology 2008) BUSM, Bryan Yamamoto, advisor (RCP committee chair)

Hilarie Tomasiewicz (PhD in Neuroscience 2010) Mt. Sinai School of Medicine, Yasmin Hurd, advisor

Maartje Veeneman-Rijkens (PhD in Neuroscience 2011) University of Utrecht, Louk Vanderschuren, advisor

Current: Catherine Wei (BUSM), Fair Vassoler (UPenn), Laurel Ecke (UPenn), Matthew Young (UPenn), Emilia Moscato (UPenn).

Teaching Experience

University of Pennsylvania

Course Manager

Neuropharmacology/Neurochemistry (Graduate Students) – Spring 2010
Managed Neurotransmitters Part II section of course
Neuropsychopharmacology (Graduate Students) – Spring 2010
Managed Addiction section of course

Lecturer

Neuropharmacology/Neurochemistry (Graduate Students) – Spring 2009, 2010
Lectures on Dopamine and Behavioral Methods
Neuroscience, Core III (Graduate Students) – Spring 2009, 2010 (Lectures on Addiction)
Neuropsychopharmacology (Graduate Students) – Fall 2010 (Lecture on Addiction)
Behavioral Neuroscience (Graduate Students) – Fall 2010 (Lecture on Addiction)
Foundations of Clinical Neuroscience (Psychiatry Residents) – Spring 2009, 2010
Lecture on Addiction

Boston University School of Medicine (1997-2008)

Primary Instructor

Neuropsychopharmacology (Graduate Students) – Fall 1998, Fall 2001, Fall 2003, Fall 2006.
Current Topics in Pharmacology (Graduate Students) – Spring 2000, Spring 2001, Spring 2005.

Lecturer

Neuroscience of Substance Abuse Disorders (Psychiatry Residents)
Lecture on Psychostimulant Abuse and Treatment
General Medical Pharmacology (Medical Students)
Lectures on Psychostimulants, Epilepsy, Drugs of Abuse and Dose-response curves
Medical Neuroscience (Medical Students)
Lecture on Drugs of Abuse
Dental Pharmacology (Dental Students)
Lectures on Drugs of Abuse, Epilepsy, Psychostimulants, Nicotine and Opioids
Introduction to Medical Pharmacology (Graduate Students)
Lectures on Drugs of Abuse, Psychostimulants and Nicotine
Advanced General Pharmacology (Graduate Students)
Lecture on Dopamine and Opioid Neurophysiology and Pharmacology
Molecular Neuropharmacology (Graduate Students)
Lecture on Neuropsychopharmacology, Microdialysis and Behavioral Pharmacology
Neuroendocrinology (Graduate Students)
Lecture on Stress-Related Hormones and Psychostimulants

1994, University of Idaho

Primary Instructor; Advanced Pharmacology (Undergraduates)

1989-1993, Indiana University

Primary Instructor: Experimental Psychology (Undergraduates)

Graduate Assistant: Introductory Psychology, Statistical Techniques, Sensation and Perception,
Drugs and the Nervous System, Advanced Statistics in Psychology (Undergraduates)
Neuropsychopharmacology (Graduate Students)

Seminar Coordinator: Psychology Undergraduate Summer Research Program (1992 and 1993).

Publications

66. Yee, J., K.R. Famous, T.J. Hopkins, M.C. McMullen, **R.C. Pierce** and H.D. Schmidt (2010). Muscarinic acetylcholine receptors in the nucleus accumbens core and shell contribute to cocaine priming-induced reinstatement of drug seeking. *European Journal of Pharmacology* 650:596-604.
65. Briand, L., F.M. Vassoler, **R.C. Pierce**, R. Valentino, J. Blendy (2010). Ventral tegmental area afferents in stress-induced reinstatement: The role of CREB. *Journal of Neuroscience* 30:16149-16159.
64. Sadri-Vakili, G., V. Kumaresan, H.D. Schmidt, K.R. Famous, P. Chawla, F.M. Vassoler, R.P. Overland, E. Xia, C.E. Bass, E.F. Terwilliger, **R.C. Pierce** and J.-H.J. Cha (2010). Cocaine-induced chromatin remodeling increases brain-derived neurotrophic factor transcription in the rat medial prefrontal cortex, which alters the reinforcing efficacy of cocaine. *Journal of Neuroscience* 30:11735-11744.
63. **Pierce, R.C.** and L.J.M.J. Vanderschuren (2010). Kicking the habit: The neural basis of ingrained behaviors in cocaine addiction. *Neuroscience and Biobehavioral Reviews* 35:212-219. PMID: PMC2903634
62. Schmidt, H.D. and **R.C. Pierce** (2010). Cocaine-induced neuroadaptations in glutamate transmission: Potential therapeutic targets for craving and addiction. *Annals of the New York Academy of Sciences* 1187:35-75.
61. Vanderschuren, L.J.M.J. and **R.C. Pierce** (2010). Sensitization processes in drug addiction. Behavioral Neuroscience of Drug Addiction, D.W. Self and J.K. Staley (Eds.). *Current Topics in Behavioral Neurosciences* 3:179-195.
60. Schmidt, H.D., F.R. Famous and **R.C. Pierce** (2009). The limbic circuitry underlying cocaine seeking encompasses the PPTg/LDT. *European Journal of Neuroscience* 30:1358-1369. PMID: PMC2875792
59. Kumaresan, V., M. Yuan, J. Yee, K.R. Famous, S.M. Anderson, H.D. Schmidt and **R.C. Pierce** (2009). Metabotropic glutamate receptor 5 (mGluR5) antagonists attenuate cocaine priming- and cue-induced reinstatement of cocaine seeking. *Behavioural Brain Research* 202: 238-244. PMID: PMC2844436
58. Sadri-Vakili, G., G.C. Janis, **R.C. Pierce**, T.T. Gibbs and D.H. Farb (2008). Nanomolar concentrations of pregnenolone sulfate enhance striatal dopamine overflow *in vivo*. *Journal of Pharmacology and Experimental Therapeutics* 327:840-845. PMID: PMC2864155
57. Famous, K.R., V. Kumaresan, G. Sadri-Vakili, H.D. Schmidt, D.F. Mierke, J.-H.J. Cha and **R.C. Pierce** (2008). Phosphorylation-dependent trafficking of GluR2-containing AMPA receptors in the nucleus accumbens plays a critical role in the reinstatement of cocaine seeking. *Journal of Neuroscience* 28:11061-11070. PMID: PMC2601563
56. Vassoler, F.M., H.D. Schmidt, M.E. Gerard, K.R. Famous, D.A. Ciraulo, C. Kornetsky, C.M. Knapp and **R.C. Pierce** (2008). Deep brain stimulation of the nucleus accumbens shell attenuates cocaine priming-induced reinstatement of drug seeking in rats. *Journal of Neuroscience* 28:8735-8739. PMID: PMC2585378
55. Anderson, S.M., K.R. Famous, G. Sadri-Vakili, V. Kumaresan, H.D. Schmidt, D.F. Mierke, J.-H.J. Cha and **R.C. Pierce** (2008). CaMKII: a biochemical bridge linking accumbens dopamine and glutamate systems in cocaine seeking. *Nature Neuroscience* 11:344-353.
54. Famous, K.R., H.D. Schmidt, and **R.C. Pierce** (2007). When administered into the nucleus accumbens core or shell, the NMDA receptor antagonist AP-5 reinstates cocaine-seeking behavior in the rat. *Neuroscience Letters* 420:169-173. PMID: PMC2713683
53. Yamamoto, N., **R.C. Pierce** and J.J. Soghomonian (2006). Subchronic administration of I-DOPA to adult rats with unilateral 6-hydroxydopamine lesion of dopamine neurons results in a sensitization of enhanced GABA release in the substantia nigra, pars reticulata. *Brain Research* 1123:196-200.
52. Schmidt, H.D. and **R.C. Pierce** (2006). Systemic administration of a dopamine, but not a serotonin or norepinephrine, transporter inhibitor reinstates cocaine seeking in the rat. *Behavioral Brain Research* 175:189-194. PMID: 16978714

51. Schmidt, H.D. and **R.C. Pierce** (2006). Cooperative activation of D₁-like and D₂-like dopamine receptors in the nucleus accumbens shell is required for the reinstatement of cocaine-seeking behavior in the rat. *Neuroscience* 142:451-461. PMID: 16844308
50. Schmidt, H.D., S.M. Anderson and **R.C. Pierce** (2006). Stimulation of D1-like or D2 dopamine receptors in the shell, but not the core, of the nucleus accumbens reinstates cocaine-seeking behavior in the rat. *European Journal of Neuroscience* 23:219-228. PMID: 16420431
49. **Pierce, R.C.** and V. Kumaresan (2006). The mesolimbic dopamine system: the final common pathway for the reinforcing effect of drugs of abuse? *Neuroscience and Biobehavioral Reviews* 30:215-238. PMID: 16099045
48. Anderson, S.M., H.D. Schmidt and **R.C. Pierce** (2006). Administration of the D2 dopamine receptor antagonist sulpiride into the shell, but not the core, of the nucleus accumbens attenuates cocaine priming-induced reinstatement of drug seeking. *Neuropsychopharmacology* 31:1452-1461. PMID: 16205775
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42. Licata, S.C., H.D. Schmidt and **R.C. Pierce** (2004). Suppressing calcium/calmodulin-dependent protein kinase II activity in the ventral tegmental area enhances the acute behavioral response to cocaine but attenuates the initiation of cocaine-induced behavioral sensitization in rats. *European Journal of Neuroscience* 19:405-414. PMID: 14725635
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40. Sadri-Vakili, G., D.W. Johnson, G.C. Janis, T.T. Gibbs, **R.C. Pierce** and D.H. Farb (2003). Inhibition of NMDA-induced striatal dopamine release and behavioral activation by the neuroactive steroid 3 α -hydroxy-5 β -pregnan-20-one hemisuccinate. *Journal of Neurochemistry* 86:92-101. PMID: 12807429
39. Licata, S.C. and **R.C. Pierce** (2003). The roles of calcium/calmodulin and ras/mitogen activated protein kinases in the development of psychostimulant-induced behavioral sensitization. *Journal of Neurochemistry* 85:14-22. PMID: 12641723
38. Freeman, A.Y. and **R.C. Pierce** (2003). Tyrosine kinase B and C receptors in the neostriatum and nucleus accumbens are co-localized in enkephalin-positive and enkephalin-negative neuronal profiles and their expression is influenced by cocaine. *Neuroscience* 117:147-156. PMID: 12605901

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36. Beinfeld, M.C., K.J. Connolly and **R.C. Pierce** (2002). Cocaine treatment increases extracellular cholecystokinin (CCK) in the nucleus accumbens shell of awake, freely moving rats, an effect that is enhanced in rats that are behaviorally sensitized to cocaine. *Journal of Neurochemistry* 81:1021-1027.
35. Park, W.-K., A.A. Bari, A.R. Jey, S.M. Anderson, R.D. Spealman, J.K. Rowlett and **R.C. Pierce** (2002). Cocaine administered into the medial prefrontal cortex reinstates cocaine-seeking behavior by increasing AMPA-mediated glutamate transmission in the nucleus accumbens. *Journal of Neuroscience* 22:2916-2925. PMID: 11923456
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31. **Pierce, R.C.**, A.F. Pierce-Bancroft and B.M. Prasad (1999). Neurotrophin-3 contributes to the initiation of behavioral sensitization to cocaine by activating the Ras/mitogen-activated protein kinase signal transduction cascade. *Journal of Neuroscience* 19:8685-8695.
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29. **Pierce, R.C.**, E.A. Quick, D.C. Reeder, Z.R. Morgan and P.W. Kalivas (1998). Calcium-mediated second messengers modulate the expression of behavioral sensitization to cocaine. *Journal of Pharmacology and Experimental Therapeutics* 286:1171-1176.
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25. **Pierce, R.C.**, W.M. Miel and P.W. Kalivas (1997). The NMDA antagonist, dizoclipine, enhances cocaine reinforcement without influencing mesoaccumbens dopamine transmission. *Psychopharmacology* 133:188-195.
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23. **Pierce, R.C.** and P.W. Kalivas (1997). Repeated cocaine modifies the mechanism by which amphetamine releases dopamine. *Journal of Neuroscience* 17:3254-3261.
22. Rebec, G.V., C.P. Grabner, M. Johnson, **R.C. Pierce**, and M.T. Bardo (1997). Transient increases in catecholaminergic activity in the medial prefrontal cortex and nucleus accumbens shell during novelty. *Neuroscience* 76:707-714.

21. **Pierce, R.C.**, P. Duffy and P.W. Kalivas (1996). Changes in excitatory amino acid transmission in the nucleus accumbens associated with behavioral sensitization to cocaine during early withdrawal. *Neuroscience Net*, article #1008.
20. **Pierce, R.C.**, B. Born, M. Adams and P.W. Kalivas (1996). Repeated intra-ventral tegmental area administration of SKF-38393 induces behavioral and neurochemical sensitization to a subsequent cocaine challenge. *Journal of Pharmacology and Experimental Therapeutics* 278:384-392.
19. **Pierce, R.C.**, K. Bell, P. Duffy and P.W. Kalivas (1996). Repeated cocaine augments excitatory amino acid transmission in the nucleus accumbens only in rats having developed behavioral sensitization. *Journal of Neuroscience* 16:1550-1560.
18. **Pierce, R.C.** and P.W. Kalivas (1995). Amphetamine produces sensitized increases in locomotion and extracellular dopamine preferentially in the nucleus accumbens shell of rats administered repeated cocaine. *Journal of Pharmacology and Experimental Therapeutics* 275:1019-1029.
17. **Pierce, R.C.**, J.K. Rowlett, G.V. Rebec and M.T. Bardo (1995). Ascorbate potentiates amphetamine-induced conditioned place preference and forebrain dopamine release in rats. *Brain Research* 688:21-26.
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15. **Pierce, R.C.**, P. Duffy and P.W. Kalivas (1995). Sensitization to cocaine and autoreceptor subsensitivity in the nucleus accumbens. *Synapse* 20:33-36
14. **Pierce, R.C.**, A.J. Clemens, L.A. Shapiro and G.V. Rebec (1994). Repeated treatment with ascorbate or haloperidol, but not clozapine, elevates extracellular ascorbate in the neostriatum of freely moving rats. *Psychopharmacology* 116:103-109.
13. **Pierce, R.C.**, A.J. Clemens, C.P. Grabner and G.V. Rebec (1994). Amphetamine promotes neostriatal ascorbate release via a nigro-thalamo-cortico-neostriatal loop. *Journal of Neurochemistry* 63:1499-1508.
12. Rebec, G.V. and **R.C. Pierce** (1994). A vitamin as neuromodulator: ascorbate release into the extracellular fluid of the brain regulates dopaminergic and glutamatergic transmission. *Progress in Neurobiology* 43:537-565.
11. **Pierce, R.C.** and G.V. Rebec (1993). Intra-neostriatal administration of glutamate antagonists increases behavioral activation and decreases neostriatal ascorbate via nondopaminergic mechanisms. *Journal of Neuroscience* 13:4272-4280.
10. Rebec, G.V., P.E. Langley, **R.C. Pierce**, Z. Wang and B.A. Heidenreich (1993). A simple micromanipulator for multiple uses in freely moving rats: electrophysiology, voltammetry, and simultaneous intracerebral infusions. *Journal of Neuroscience Methods* 47:53-59.
9. **Pierce, R.C.**, Miller, D.W., D.B. Reising and G.V. Rebec (1992). Unilateral neostriatal kainate, but not 6-OHDA, lesions block dopamine agonist-induced ascorbate release in the neostriatum of freely-moving rats. *Brain Research* 597:138-143.
8. **Pierce, R.C.** and G.V. Rebec (1992). Dopamine-, NMDA-, and sigma-receptor antagonists exert differential effects on neostriatal ascorbate and DOPAC in awake, behaving rats. *Brain Research* 579:59-66.
7. Yount, S.E., M.E. Kraft, **R.C. Pierce**, P.E. Langley and G.V. Rebec (1991). Acute and long-term amphetamine treatments alter extracellular ascorbate in neostriatum but not nucleus accumbens of freely moving rats. *Life Sciences* 49:1237-1244.
6. **Pierce, R.C.**, J.K. Rowlett, M.T. Bardo and G.V. Rebec (1991). Chronic ascorbate potentiates the effects of chronic haloperidol on behavioral supersensitivity but not D2 dopamine receptor binding. *Neuroscience* 45:373-378.

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5. **Pierce, R.C.** and G.V. Rebec (1990). Stimulation of both D-1 and D-2 dopamine receptors increases behavioral activation and ascorbate release in the neostriatum of freely moving rats. *European Journal of Pharmacology* 191:295-302.
 4. Bardo, M.T., S.L. Bowling and **R.C. Pierce** (1990). Changes in locomotion and dopamine neurotransmission following amphetamine, haloperidol, and exposure to novel environmental stimuli. *Psychopharmacology* 101:338-343.
 3. **Pierce, R.C.**, C.A. Crawford, A.J. Nonneman, B.A. Mattingly and M.T. Bardo (1990). Effect of forebrain dopamine depletion on novelty-induced place preference behavior in rats. *Pharmacology, Biochemistry and Behavior* 36:321-325.
 2. Neisewander, J.L., **R.C. Pierce** and M.T. Bardo (1990). Naloxone enhances the expression of morphine-induced conditioned place preference. *Psychopharmacology* 100:201-205.
 1. Bardo, M.T., J.L. Neisewander and **R.C. Pierce** (1989). Novelty-induced place preference behavior in rats: Effects of opiate and dopaminergic drugs. *Pharmacology, Biochemistry and Behavior* 32:683-689.
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Other Publications

4. **Pierce, R.C.** (2003). Drugs of Abuse. *Informational brochure published by Sigma-RBI.*
 3. **Pierce, R.C.** and P.W. Kalivas (1994). The role of nucleus accumbens dopamine and excitatory amino acids in the expression of cocaine-induced behavioral sensitization in rats. *Behavioural Pharmacology* 5:108.
 2. **Pierce, R.C.**, Z. Wang, B.A. Heidenreich, P.E. Langley and G.V. Rebec (1992). An easily-fabricated electrode holder for recordings from awake, behaving animals. *Kopf Carrier* 32:1-5.
 1. **Pierce, R.C.** and G.V. Rebec (1991). In vivo voltammetry in freely moving rats: Effects of dopamine agonists and neuroleptics on neostriatal ascorbate. *Current Separations* 10:94-95.
-

Book Chapters:

3. Famous, K.R. and **R.C. Pierce**. (2008). The role of nucleus accumbens glutamate in cocaine craving and addiction. In: H.N. David (Ed.) *The Nucleus Accumbens: Neurotransmitters & Related Behaviours*.
 2. **Pierce, R.C.** and P.W. Kalivas (1997, revised 2007). Locomotor behavior. In: J. Crawley (Ed.) *Current Protocols in Neuroscience*.
 1. Rebec, G.V., **R.C. Pierce**, and E.A. Kiyatkin (1997). Modulation of glutamate-induced excitation of striatal neurons by dopamine iontophoresis in awake, unrestrained rats. *The Basal Ganglia V*.
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Invited Seminars:

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| May 2, 2011 | NIDA's Neuroscience Consortium Cutting Edge Symposium, <i>NIDA</i> , Rockville, MD |
| April 21, 2011 | Department of Pharmacology, <i>Mt. Sinai School of Medicine</i> , New York, NY |
| November 4, 2010 | Department of Neurology & Neuroscience, <i>Weill Cornell Medical College</i> , New York, NY |
| September 16, 2010 | Department of Physiology and Pharmacology, <i>Wake Forest University School of Medicine</i> , Winston-Salem, NC |
| June 23, 2010 | Department of Pharmacology, <i>Penn State College of Medicine</i> , Hershey PA |
| March 30, 2010 | Department of Neuroscience, <i>Univ. of Connecticut Health Center</i> , West Hartford, CT |
| April 29, 2009 | Department of Pharmacology, <i>University of Memphis</i> , Memphis TN |
| February 24, 2009 | Division of Intramural Research, <i>Addiction Research Center</i> , Baltimore, MD. |
| April 30, 2008 | Department of Pharmacology, <i>Rosalind Franklin University</i> , Chicago, IL |
| April 9, 2008 | Department of Pharmacology, <i>Temple University</i> , Philadelphia, PA |
| March 25, 2008 | Department of Neuroscience, <i>University of Bordeaux 2</i> , France |
| March 13, 2008 | Department of Pharmacology, <i>Free University of Amsterdam</i> , the Netherlands |
| March 12, 2008 | Rudolf Magnus Institute, <i>University of Utrecht</i> , the Netherlands |
| Dec. 4, 2007 | Department of Biomedical Sciences, <i>Marquette University</i> , Milwaukee, WI |
| Sept. 27, 2007 | Department of Psychiatry, <i>University of Pennsylvania</i> , Philadelphia, PA |
| May 2, 2007 | Depts. of Psychiatry & Neuroscience, <i>Einstein Medical College</i> , Bronx, NY |
| March 22, 2007 | Ernest Gallo Clinic and Research Center, <i>University of California</i> , San Francisco, Emeryville, CA |
| August 24, 2006 | Division of Clinical Pharmacology, <i>Vanderbilt University</i> , Nashville, TN |
| February 25, 2005 | Psychology Department, <i>Boston College</i> , Boston, MA |
| May 18, 2004 | Psychiatry Department, <i>Harvard Medical School (McLean Hospital)</i> , Boston, MA |
| May 17, 2004 | Neuroscience Department, <i>Brown University</i> , Providence, RI. |
| February 27, 2004 | Program in Neural Science, <i>Indiana University</i> , Bloomington, IN |
| February 19, 2003 | Department of Pharmacology and Experimental Therapeutics, <i>Tufts University Health Sciences Campus</i> , Boston, MA. |
| October 18, 2002 | Department of Physiology and Neuroscience, <i>Medical University of South Carolina</i> , Charleston, SC. |
| June 3, 2002 | Department of Pharmacology, <i>University of New England School of Osteopathic Medicine</i> , Biddeford, ME. |
| February 8, 2002 | Department of Pathology, <i>Boston University School of Medicine</i> , Boston, MA. |
| January 9, 2002 | Division of Intramural Research, <i>Addiction Research Center</i> , Baltimore, MD. |
| April 9, 2001 | Department of Psychiatry, <i>Yale University School of Medicine</i> , New Haven, CT. |
| March 29, 2001 | Department of Pharmacology, <i>Northeastern University</i> , Boston, MA. |
| February 1, 2001 | Department of Psychiatry (Grand Rounds), <i>Boston University School of Medicine</i> , Boston, MA. |
| December 20, 2000 | Department of Neuroscience, <i>Tufts University Health Sciences Campus</i> , Boston, MA. |
| October 20, 2000 | Department of Anatomy and Neurobiology, <i>Boston University School of Medicine</i> , Boston, MA. |
| October 13, 1999 | Department of Pharmacology and Experimental Therapeutics, <i>Tufts University Health Sciences Campus</i> , Boston, MA. |
| February 13, 1998 | Psychology Department, <i>Boston University</i> , Boston, MA;. |
| May 16, 1997 | Psychology Department, <i>Barnard College</i> , New York, NY. |

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| April 18, 1997 | Pharmacology Department, <i>University of Minnesota</i> , Duluth, MN. |
| January 30, 1997 | Behavioral Pharmacology Section, <i>Schering-Plough Inc.</i> , Kenilworth, NJ. |
| October 11, 1996 | Yerkes Regional Primate Center, <i>Emory University</i> , Atlanta, GA. |
| March 15, 1996 | Psychology Department, <i>University of Illinois</i> , Champagne-Urbana, IL. |
| February 8, 1996 | Psychology Department, <i>University of Wisconsin</i> , Milwaukee, WI. |
| December 1, 1995 | Psychology Department, <i>State University of New York at Binghamton</i> . |
| February 3, 1995 | Psychology Department, <i>University of Delaware</i> , Newark, DE. |

Professional Meetings: Program Organization and Invited Presentations

- Pierce, R.C.** (participant), C. O'Brien (organizer), G. Koob, P. Piazza, T. Crowley. Under construction: Phospho-bridges integrate dopamine and glutamate signaling in the striatal cytoskeleton. *Winter Conference on Brain Research, 43rd Annual Meeting*; Keystone, CO (January, 2011).
- Pierce, R.C.** (participant), James McCutcheon (organizer), C. Bellone, K. Szumlinski. Metabotropic glutamate receptor regulation of AMPA receptors in addiction: From physiology to behavior. *Winter Conference on Brain Research, 43rd Annual Meeting*; Keystone, CO (January, 2011).
- Pierce, R.C.** (participant). U.S.-Netherlands workshop on binational research collaboration on drug abuse and addiction. Washington, D.C. (October 2009).
- Pierce, R.C.** (participant), T. De Vries (organizer), R. LaLumiere, M. Wolf, S. Spijker. Too much excitement? Role of glutamate signaling in relapse to drug seeking. *Winter Conference on Brain Research, 42nd Annual Meeting*; Copper Mountain, CO (January, 2009).
- Pierce, R.C.** (participant), J. McGinty (organizer), G. Snyder, D. Sibley. Under construction: Phospho-bridges integrate dopamine and glutamate signaling in the striatal cytoskeleton. *Winter Conference on Brain Research, 42nd Annual Meeting*; Copper Mountain, CO (January, 2009).
- Pierce, R.C.** (presentation of Jacob P. Waletzky Memorial Lecture); Introduction by NIDA Director Nora D. Volkow; Co-chairs: Catharine Sasek and Rita Liu; CaMKII: a biochemical bridge linking accumbens dopamine and glutamate systems in cocaine seeking. *Frontiers in Addiction Research: 2008 NIDA Mini-Convention*; Washington, DC (November, 2008).
- Pierce, R.C.** (organizer and participant), C. Colvis (co-organizer), G. Sadri-Vakili, A. West, C. Ferris. Epigenetics of cocaine addiction. *Winter Conference on Brain Research, 40th Annual Meeting*; Snowmass, CO (January, 2007).
- Pierce, R.C.** (organizer), P. Mermelstein, H. Schmidt, A. Rajadhyaksha, X.-T. Hu. Psychostimulants, L-type calcium channels and the 'Yin and Yang' of PKA signaling in the nucleus accumbens. *Winter Conference on Brain Research, 39th Annual Meeting*; Steamboat, CO (January, 2006).
- Pierce, R.C.** (speaker). Neuropsychopharmacology of aggression and addiction. *European Journal of Pharmacology Spring Meeting*; Ziest, The Netherlands (June, 2005).
- Pierce, R.C.** (chair and participant), A.M. Brady (co-chair), S. Totterdell, S. Floresco, J. Parkinson, M. Andrzejewski. Dopamine-glutamate interactions in the nucleus accumbens: from anatomy and physiology to behavior. *Society for Neuroscience, 34th Annual Meeting*; San Diego, CA (October, 2004).
- Pierce, R.C.** (participant), W.A. Carlezon (organizer). Psychopharmacology Social. *Society for Neuroscience, 34th Annual Meeting*; San Diego, CA (October, 2004).
- Pierce, R.C.** (co-organizer and participant), M. Lynch (co-organizer), D. Self, P. DiCiano, K. McFarland. Nucleus accumbens glutamate and addiction: Axis of evil or coalition against craving? *Winter Conference on Brain Research, 37th Annual Meeting*; Copper Mountain, CO (January, 2004).
- Pierce, R.C.** (organizer), W. Carlezon, C. Kornetsky, K. Miczek, M. Picciotto, G. Rebec, T. Robinson, J. Stewart, B. Yamamoto. Psychopharmacology Social. *Society for Neuroscience, 33rd Annual Meeting*; New Orleans, LA (November, 2004).

- Pierce, R.C.** (organizer), L. Porrino, K. Miczek, S. Deadwyler, G. Koob, C. Kornetsky, M. Adler, S. Izenwasser, E. Unterwald, O McNeil, C. Walsh. Current perspectives on drug abuse research: a symposium in honor of Conan Kornetsky, Ph.D. (BUSM; 10 October 2003).
- Pierce, R.C.** (participant), K. Szumlinski (co-organizer and participant), P. Kalivas (co-organizer and discussant), W. Carlezon, D. Self. It's what's on the inside that counts: role of intracellular signaling and scaffolding proteins in addiction. *College on Problems of Drug Dependence, 65th Annual Meeting*; Bal Harbour, FL (June, 2003).
- Pierce, R.C.** (participant), G. Lin (conference organizer). Stem cells – opportunities for drug abuse research. Baltimore, MD (February, 2003).
- Pierce, R.C.** (participant), P. O'Donnell (organizer), G. Hanson, K. Anstrom, W. Carlezon, K. Frantz, M. Laruelle, M. Picciotto. Town meeting in Sandy, UT. Drug abuse – morality versus medicine: a proper perspective. *Winter Conference on Brain Research, 36th Annual Meeting*; Sandy, UT (January, 2003).
- Pierce, R.C.** (symposium organizer and participant) J.K. Rowlett, R. See, F. Weiss. Anatomical and pharmacological determinants of relapse to cocaine-seeking behavior. *Winter Conference on Brain Research, 35th Annual Meeting*; Snowmass Village, CO (January, 2002).
- Pierce, R.C.** (participant), W. Carlezon (organizer and participant), B. Catterall, C. Konradi. No bones about it: Roles for calcium in the acute and chronic actions of drugs of abuse. *Winter Conference on Brain Research, 35th Annual Meeting*; Snowmass Village, CO (January, 2002).
- Pierce, R.C.** (organizer), K. Seroogy, A. Altar, J. Taylor, C. Flores. Neurotrophic factor-induced dopaminergic plasticity in animal models of Parkinson's disease and drug addiction. *Winter Conference on Brain Research, 34th Annual Meeting*; Steamboat Springs, CO (January, 2001).
- Pierce, R.C.** (participant), K. Neve (organizer), A. Janowsky, K. Merchant, V. Watts. Psychostimulant-induced sensitization: behavioral and cellular models. *Winter Conference on Brain Research, 33rd Annual Meeting*; Breckenridge, CO (January, 2000).
- Pierce, R.C.** (participant), A. Kelley (organizer), B. Everitt, F. White. Selective changes in dopaminergic transmission in the shell of the nucleus accumbens associated with exposure to novel stimuli and behavioral sensitization to cocaine. *Annual Meeting of the American College of Neuropsychopharmacology*; San Juan, Puerto Rico (December, 1995).

Papers Presented at Professional Meetings

- Pierce, R.C.**, H.D. Schmidt White, S.L., J.A. Petko, W. Berrettini and R. Levenson. Cocaine self-administration increases neuronal calcium sensor-1 (NCS-1) levels selectively in the nucleus accumbens core. *Society for Neuroscience, 40th Annual Meeting*; San Diego, CA (November, 2010).
- Schassburger, R.L., H.D. Schmidt, T.J. Hopkins, M.E. McMullen and **R.C. Pierce**. Administration of a protein kinase C inhibitor into the nucleus accumbens core or shell attenuates cocaine priming-induced reinstatement of drug seeking. *Society for Neuroscience, 40th Annual Meeting*; San Diego, CA (November, 2010).
- White, S.L., H.D. Schmidt and **R.C. Pierce**. Identifying the mechanisms underlying GluR1 subunit trafficking in the nucleus accumbens during cocaine reinstatement. *Society for Neuroscience, 40th Annual Meeting*; San Diego, CA (November, 2010).
- Schmidt, H.D., R.L. Schassburger, V. Kumaresan, J.-H.J. Cha, **R.C. Pierce** and G. Sadri-Vakili. Examination of the epigenetic mechanisms underlying the increase in VTA BDNF transcription associated with the incubation of cocaine craving. *Society for Neuroscience, 40th Annual Meeting*; San Diego, CA (November, 2010).
- Briand, L.A., J.L. Onksen, **R.C. Pierce** and J.A. Blendy. A mouse model of reduced hippocampal neurogenesis exhibits alterations in motivated behavior. *Society for Neuroscience, 40th Annual Meeting*; San Diego, CA (November, 2010).

- Ortinski, P.I., Vassoler, F.M., R.L. Schassburger and **R.C. Pierce**. Cocaine self-administration enhances D1 dopamine receptor-mediated potentiation of NMDA receptor currents in principal neurons of the nucleus accumbens shell. *Society for Neuroscience, 40th Annual Meeting*; San Diego, CA (November, 2010).
- Espallergues, J., P. Ortinski, M. Johns, F. Tronche, E.S. Deneris, **R.C. Pierce**, S.G. Beck and O. Berton. Optogenetics-based dissection of raphe efferent circuits relevant to depression. *Society for Neuroscience, 40th Annual Meeting*; San Diego, CA (November, 2010).
- L.E. Ecke, L.A. Briand, **R.C. Pierce** and J.A. Blendy. Sensitization to stress following prolonged abstinence from cocaine. *Society for Neuroscience, 40th Annual Meeting*; San Diego, CA (November, 2010).
- Vassoler, F.M., G.C. Carlson and **R.C. Pierce**. Unraveling the roles of the core and shell of the nucleus accumbens in cocaine reinstatement. *Society for Neuroscience, 40th Annual Meeting*; San Diego, CA (November, 2010).
- Briand, L.A., F.M. Vassoler, **R.C. Pierce**, R.J. Valentino and J.A. Blendy. Ventral tegmental afferents in stress-induced reinstatement: The role of CREB. *Insights into the Neurobiology of Addiction*; Arcachon, France (October, 2010).
- Vassoler, F.M., G.C. Carlson and **R.C. Pierce**. Unraveling the roles of the core and shell of the nucleus accumbens in cocaine reinstatement. *Insights into the Neurobiology of Addiction*; Arcachon, France (October, 2010).
- Vassoler, F.M., H.D. Schmidt and **R.C. Pierce**. Examination of the behavioral effects of deep brain stimulation of limbic nuclei in cocaine reinstatement. *Society for Neuroscience, 39th Annual Meeting*; Chicago, IL (October, 2009).
- White, S.L., F.M. Vassoler, H.D. Schmidt and **R.C. Pierce**. The role of GABA receptors in the nucleus accumbens core and shell in cocaine priming-induced reinstatement of drug seeking. *Society for Neuroscience, 39th Annual Meeting*; Chicago, IL (October, 2009).
- Briand, L.A., H.D. Schmidt, F.M. Vassoler, **R.C. Pierce** and J.A. Blendy. Cocaine self-administration behavior in cAMP response element binding protein (CREB) mutant mice. *Society for Neuroscience, 39th Annual Meeting*; Chicago, IL (October, 2009).
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