



R. Christopher Pierce, Ph.D.  
Curriculum Vitae  
June, 2009



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### Work Address and Phone Numbers

Center for Neurobiology and Behavior  
Department of Psychiatry  
University of Pennsylvania School of Medicine  
125 South 31<sup>st</sup> 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](mailto:rcpierce@mail.med.upenn.edu)

### Home Address and Phone Number

2231 Catharine Street  
Philadelphia, PA 19146

Cell: (617) 285-2933

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### Personal Information

Date and Place of Birth: 21 November 1966 (Somerset, KY)  
Marital Status: Married (Audrey Pierce-Bancroft), one son (Colin Pierce, born 7/11/99)  
Web Site: <http://www.piercelab.org>

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### Education

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

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### Professional Experience

2008 - present	Associate Professor (with tenure) of Neuroscience in 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

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## Consulting

Scientific advisor, SimBiotic Software (Ithaca, NY - makers of GeneBeaker educational software)

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## Grants and Awards

### Active

K02 DA18678, R.C. Pierce (PI) 4/01/06-03/31/11

NIH/NIDA "Psychostimulant-induced craving and toxicity"

\$570,270 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.

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.

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 is a pre-doctoral National Research Service Award for MD/PhD students.

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### Inactive

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

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**Inactive Grants and Awards cont.**

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.

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.

Inactive Grants and Awards cont.

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"

\$154,340.97 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

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)

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## 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)

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## 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

### 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

Parkinsonism & Related Disorders

Peptides

Pharmacology, Biochemistry and Behavior

Physiology and Behavior

PLoS Biology

Proceedings of the National Academy of Science  
(USA)

Progress in Neuro-Psychopharmacology & Biological  
Psychiatry

Psychopharmacology

Synapse

Trends in Neuroscience

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## 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)

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## Grant Review

### Regular Member, NIH Study Section

Molecular Neuropharmacology and Signaling (MNPS) 2008 - 2012

### 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

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

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## Administrative Service

### University of Pennsylvania

Neuroscience Graduate Group Admissions Committee

Evaluator, Neuroscience Graduate Group Oral Rotation Reports

### 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 - present)

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 - present)

Department of Pharmacology Awards Committee (2001 - present)

Department of Pharmacology Space Committee (2001 - 2003)

Steering Committee, Program in Neuroscience (2005 - present)

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.

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## 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: Instructor of Psychiatry, McLean Hospital, Harvard Medical School (Belmont, MA)
- Ghazaleh Sadri-Vaklili (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, 31<sup>st</sup> 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) "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: Medical student (BUSM)
- Fair Vassoler (current)

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## Thesis Advisees continued

### Masters (empirical)

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 (current). Honors/Awards: Undergraduate Research Opportunities Program research award.

### Masters (literature review theses)

Paolo Petraghani-Ciancarelli (MA, 2000)

David Cho (MA, 2000)

Lekshmi Venugopal (MA, 2000)

Haim Sahalon (MA, 2001)

Phong Chen (MA, 2003)

Jared Fayer (MA, 2003)

Michael Kakasian (MA, 2004)

John Williams (MA, 2004)

Jacob Crowell (MA, 2008)

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

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)

Current: Catherine Wei (BUSM), Fair Vassoler (UPenn), Laurel Ecke (UPenn).

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## Teaching Experience

### University of Pennsylvania (2008-present)

#### Lecturer

Neuropharmacology/Neurochemistry (Graduate Students) – Spring 2009  
Lectures on Dopamine and Behavioral Methods  
Neuroscience, Core III (Graduate Students) – Spring 2009  
Lectures 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

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: 19463707
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: 18772319
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: 18945913
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: 18753374
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. PMID: 18278040
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: 17513051
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 D<sub>1</sub>-like and D<sub>2</sub>-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
47. Schmidt, H.D., S.M. Anderson, K.R. Famous, V. Kumaresan, and **R.C. Pierce** (2005). Anatomy and pharmacology of cocaine priming-induced reinstatement of drug seeking. *European Journal of Pharmacology* 526:65-76. PMID: 16420431
46. Bari, A.A, and **Pierce, R.C.** (2005). D1-like and D2 dopamine receptor antagonists administered into the shell subregion of the rat nucleus accumbens decrease cocaine, but not food, reinforcement. *Neuroscience* 135:959-968. PMID: 16111825
45. Anderson, S.M. and **R.C. Pierce** (2005). Cocaine-induced alterations in dopamine receptor signaling: implications for reinforcement and reinstatement. *Pharmacology and Therapeutics* 106:389-403. PMID: 15922019

44. Dunn, J.M, B.R. Inderwies, S.C. Licata, S.C. and **R.C. Pierce** (2005). Repeated administration of AMPA or a metabotropic glutamate receptor agonist into the rat ventral tegmental area augments the subsequent behavioral hyperactivity induced by cocaine. *Psychopharmacology* 179:172-180. PMID: 15580483
43. Licata, S.C. and **R.C. Pierce** (2004). Repeated cocaine injections have no influence on tyrosine hydroxylase activity in the rat nucleus accumbens core or shell. *Brain Research* 1012:119-126. PMID: 15158168
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
41. Anderson, S.M., A.A. Bari and **R.C. Pierce** (2003). Administration of the D1-like dopamine receptor antagonist SCH-23390 into the nucleus accumbens shell attenuates cocaine priming-induced reinstatement of drug seeking behavior. *Psychopharmacology* 168:132-138.
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 $\alpha$ -hydroxy-5 $\beta$ -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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32. Licata, S.C., A.Y. Freeman, A.F. Pierce-Bancroft and **R.C. Pierce** (2000). Repeated stimulation of L-type calcium channels in the rat ventral tegmental area mimics the initiation of behavioral sensitization to cocaine. *Psychopharmacology* 152:110-118. PMID: 11041323
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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27. **Pierce, R.C.**, D.C. Reeder, J. Hicks, Z.R. Morgan and P.W. Kalivas (1998). Ibotenic acid lesions of the dorsal prefrontal cortex disrupt the expression of behavioral sensitization to cocaine. *Neuroscience* 82:1103-1114.
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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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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.
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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.
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16. **Pierce, R.C.** and G.V. Rebec (1995). Iontophoresis in the neostriatum of awake, unrestrained rats: differential effects of dopamine, glutamate and ascorbate on motor- and nonmotor-related neurons. *Neuroscience* 67:313-324.
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.

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  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). Intraneostriatal 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.
  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.

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#### Book Chapters:

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:

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.
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.

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**Professional Meetings: Program Organization and Invited Presentations**

- 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, 42<sup>nd</sup> 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, 42<sup>nd</sup> 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, 40<sup>th</sup> 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, 39<sup>th</sup> 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, 34<sup>th</sup> Annual Meeting*; San Diego, CA (October, 2004).
- Pierce, R.C.** (participant), W.A. Carlezon (organizer). Psychopharmacology Social. *Society for Neuroscience, 34<sup>th</sup> 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, 37<sup>th</sup> 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, 33<sup>rd</sup> 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, 65<sup>th</sup> 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, 36<sup>th</sup> 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, 35<sup>th</sup> 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, 35<sup>th</sup> Annual Meeting*; Snowmass Village, CO (January, 2002).

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## Professional Meetings: Program Organization and Invited Presentations cont.

- 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, 34<sup>th</sup> 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, 33<sup>rd</sup> 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).
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## Papers Presented at Professional Meetings

- Sadri-Vakili, G., V. Kumaresan, P. Chawla, E. Xia, R.P. Overland, H.D. Schmidt, C.E. Bass, E.F. Terwilliger, **R.C. Pierce** and J.-H.J. Cha. Epigenetic regulation of BDNF in the rat medial prefrontal cortex alters the reinforcing efficacy of cocaine. *Society for Neuroscience, 38<sup>th</sup> Annual Meeting*; Washington, DC (November, 2008).
- Kumaresan, V., G. Sadri-Vakili, J. Yee, M. Yuan, H.D. Schmidt, K.R. Famous, J.-H.J. Cha and **R.C. Pierce**. Metabotropic glutamate receptor 5 (mGluR5) antagonists attenuate reinstatement of cocaine seeking induced by cocaine cues or a cocaine priming injection. *Society for Neuroscience, 38<sup>th</sup> Annual Meeting*; Washington, DC (November, 2008).
- Vassoler, F.R., H.D. Schmidt, M.E. Gerard, K.R. Famous, D.A. Circaulo, C.M. Knapp, C. Kornetsky and **R.C. Pierce**. Deep brain stimulation of the nucleus accumbens shell or prefrontal cortex attenuates reinstatement of cocaine seeking in rats. *Society for Neuroscience, 38<sup>th</sup> Annual Meeting*; Washington, DC (November, 2008).
- Famous, K.R., G. Sadri-Vakili, V. Kumaresan, H.D. Schmidt, J.-H. Cha and **R.C. Pierce**. Increased transcription of CaM-KII in the rat medial prefrontal cortex promotes the reinstatement of cocaine-seeking behavior. *Society for Neuroscience, 37<sup>th</sup> Annual Meeting*; San Diego, CA (November, 2007).
- Sadri-Vakili, G., V. Kumaresan, K.R. Famous, R.P. Overland, E. Xia, H.D. Schmidt, **R.C. Pierce** and J.-H.J. Cha. Epigenetic regulation of cocaine-induced increases of brain-derived neurotrophic factor transcript in the medial prefrontal cortex of the rat. *Society for Neuroscience, 37<sup>th</sup> Annual Meeting*; San Diego, CA (November, 2007).
- Maclaren, F.R., M.E. Gerard, H.D. Schmidt, K.R. Famous, C.M. Knapp, C. Kornetsky and **R.C. Pierce**. Deep brain stimulation of the nucleus accumbens shell attenuates cocaine priming-induced reinstatement of drug seeking in rats. *Society for Neuroscience, 37<sup>th</sup> Annual Meeting*; San Diego, CA (November, 2007).
- Kumaresan, V., K.R. Famous, C. Bass, D.F. Mierke, E. Terwilliger and **R.C. Pierce**. A tale of tails: trafficking of nucleus accumbens shell GluR1- and GluR2- containing AMPA receptors in the reinstatement of cocaine-seeking. *Society for Neuroscience, 37<sup>th</sup> Annual Meeting*; San Diego, CA (November, 2007).
- R.C. Pierce**. Calcium/calmodulin-dependent protein kinase II (CaM-KII): the biochemical bridge linking nucleus accumbens dopamine and glutamate systems in the reinstatement of cocaine seeking. *European Behavioral Pharmacology, 12<sup>th</sup> Biennial Meeting*; Tübingen, Germany (September, 2007).
- Schmidt, H.D. and **R.C. Pierce**. Cooperative activation of D1-like and D2-like dopamine receptors in the nucleus accumbens shell is required for the reinstatement of cocaine-seeking behavior. *Society for Neuroscience, 36<sup>th</sup> Annual Meeting*; Atlanta, GA (November, 2006).
- Sadri-Vakili, G., V. Kumaresan, R.P. Overland, H.D. Schmidt, K.R. Famous **R.C. Pierce** and J.J. Cha. Cocaine self-administration increases brain derived neurotrophic factor mRNA and histone acetylation in the ventral tegmental area and medial prefrontal cortex of the rat. *Society for Neuroscience, 36<sup>th</sup> Annual Meeting*; Atlanta, GA (November, 2006).

- Yee, J., K.R. Famous and **R.C. Pierce**. Systemic administration of the muscarinic cholinergic antagonist scopolamine attenuates cocaine-primed reinstatement of drug seeking. *Society for Neuroscience, 36<sup>th</sup> Annual Meeting*; Atlanta, GA (November, 2006).
- Famous, K.R., V. Kumaresan, G. Sadri-Vakili, H.D. Schmidt, D.F. Mireke, J. Cha and **R.C. Pierce**. Behavioral and molecular evidence that increased glutamate transmission through AMPA receptors in both the core and shell of the nucleus accumbens promotes the reinstatement of cocaine seeking. *Society for Neuroscience, 36<sup>th</sup> Annual Meeting*; Atlanta, GA (November, 2006).
- Ratner, M.H., S. Desbiens, **R.C. Pierce**, T.T. Gibbs and D.H. Farb. Pregnanolone hemisuccinate inhibits reinstatement of cocaine seeking in rats. *Society for Neuroscience, 36<sup>th</sup> Annual Meeting*; Atlanta, GA (November, 2006).
- Kumaresan, V., G. Sadri-Vakili, J. Yee, H.D. Schmidt, K.R. Famous, N. D'Agostini, J. Cha and **R.C. Pierce**. Role of nucleus accumbens metabotropic receptors (mGluR5) in the reinstatement of cocaine seeking. *Society for Neuroscience, 36<sup>th</sup> Annual Meeting*; Atlanta, GA (November, 2006).
- H.D. Schmidt and **R.C. Pierce**. A novel role for the pedunculo-pontine tegmental nucleus in cocaine priming-induced reinstatement of drug seeking. *Society for Neuroscience, 35<sup>th</sup> Annual Meeting*; Washington, DC (November, 2005).
- K.R. Famous and **R.C. Pierce**. Administration of the NMDA antagonist AP-5 into the nucleus accumbens shell reinstates cocaine-seeking behavior. *Society for Neuroscience, 35<sup>th</sup> Annual Meeting*; Washington, DC (November, 2005).
- V. Kumaresan, H.D. Schmidt and **R.C. Pierce**. Effects of cocaine self-administration on the expression of ephrins and their receptors in the core and shell of the nucleus accumbens. *Society for Neuroscience, 35<sup>th</sup> Annual Meeting*; Washington, DC (November, 2005).
- S.M. Anderson, H.D. Schmidt, K.R. Famous, V. Kumaresan and **R.C. Pierce**. Intra-accumbal shell administration of the D1 dopamine receptor antagonist SKF 81297 promotes cocaine seeking by activating L-type calcium channels and calcium/calmodulin-dependent protein kinase II. *Society for Neuroscience, 35<sup>th</sup> Annual Meeting*; Washington, DC (November, 2005).
- S.M. Anderson and **R.C. Pierce**. Systemic administration of the L-type calcium channel antagonist diltiazem attenuates cocaine priming-induced reinstatement. *College on Problems of Drug Dependence, 67<sup>th</sup> Annual Meeting*; Orlando, FL (June, 2005).
- K.R. Famous, H.D. Schmidt and **R.C. Pierce**. Administration of a D1-like agonist into the infralimbic region of the prefrontal cortex reinstates cocaine-seeking behavior. *Society for Neuroscience, 34<sup>th</sup> Annual Meeting*; San Diego, CA (October, 2004).
- S.M. Anderson and **R.C. Pierce**. Systemic administration of the L-type calcium channel antagonist, diltiazem, attenuates cocaine-priming induced reinstatement of drug-seeking behavior. *Society for Neuroscience, 34<sup>th</sup> Annual Meeting*; San Diego, CA (October, 2004).
- H.D. Schmidt and **R.C. Pierce**. Administration of D1-like or D2 dopamine receptor agonists into the nucleus accumbens shell reinstates cocaine-seeking behavior. *Society for Neuroscience, 34<sup>th</sup> Annual Meeting*; San Diego, CA (October, 2004).
- A.A. Bari, **R.C. Pierce** and D. Silva. Microinjection of D1- or D2-dopamine receptor antagonists but not a D3 antagonist into the core or shell of the nucleus accumbens decreases breakpoint on a progressive ratio schedule for intravenous cocaine self-administration. *Society for Neuroscience, 34<sup>th</sup> Annual Meeting*; San Diego, CA (October, 2004).
- S.M. Anderson, A.A. Bari and **R.C. Pierce**. Administration of D2-like dopamine receptor antagonists into the nucleus accumbens shell attenuates cocaine-priming induced reinstatement of drug-seeking behavior. *Society for Neuroscience, 33<sup>rd</sup> Annual Meeting*; New Orleans, LA (October, 2003).
- A.A. Bari and **R.C. Pierce**. Intra-accumbal microinjection of a D1/5 or D2 dopamine receptor antagonist or AMPA antagonist but not a D3 or NMDA receptor antagonist decreases breakpoint on a progressive ratio schedule

- for intravenous cocaine self-administration. *Society for Neuroscience, 33<sup>rd</sup> Annual Meeting*; New Orleans, LA (October, 2003).
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### Professional References

Peter W. Kalivas, PhD  
Medical University of South Carolina  
Dept. Physiology and Neuroscience  
650 MUSC Complex Suite 607  
Charleston SC 29425  
Work Phone: 843-792-2005  
Fax: 843-792-4423  
E-mail address: [kalivasp@musc.edu](mailto:kalivasp@musc.edu)

Conan Kornetsky, PhD  
Boston University School of Medicine  
Dept Psychiatry  
715 Albany Street, L-602  
Boston MA 02118  
Work Phone: 617-638-4320  
Fax: 617-638-4329  
E-mail Address: [ckornets@acs.bu.edu](mailto:ckornets@acs.bu.edu)

George V. Rebec, PhD  
Indiana University  
Department of Psychology  
1101 E. Tenth Street  
Bloomington IN 47405-7007  
Work Phone: 812-855-4832  
Fax: 812-855-4520  
E-mail Address: [rebec@indiana.edu](mailto:rebec@indiana.edu)

Bryan K. Yamamoto, PhD  
Block Health Sciences Building, Room 130B  
Department of Neurosciences  
University of Toledo School of Medicine  
Toledo, OH  
Work Phone: 419-383-61150  
Fax: 419-383-3346  
E-mail Address: [Bryan.Yamamoto@utoledo.edu](mailto:Bryan.Yamamoto@utoledo.edu)