

PETE ROMA

Curriculum Vitae

Contact Information

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Address: Psychopharmacology Laboratory
Department of Psychology
American University
4400 Massachusetts Avenue, NW
Washington, DC 20016

Career Goal

Thrive in a productive, professional environment as a full-time contributor to pre-clinical research and development efforts in the area of Behavioral Neuroscience, including Behavioral Pharmacology, Behavioral Genetics, and Comparative Psychology.

Education

Ph.D. in Psychology, Behavioral Neuroscience Program
Expected Spring/Summer 2008
American University
Washington, DC, USA

M.A. in Psychology, Behavioral Neuroscience Program
May 2005
American University
Washington, DC, USA

Dual B.A.s in Psychology and Communication Studies
May 1999
West Chester University
West Chester, PA, USA
Graduated *magna cum laude*

Research Experience

American University

Psychopharmacology Laboratory, Department of Psychology
Ph.D. program in Behavioral Neuroscience, primary laboratory
Fall 2003-Present

Advisor: Anthony L. Riley, Ph.D., Laboratory Director and Chair, Department of Psychology
Email: alriley@american.edu
Tel: 202-885-1720

National Institutes of Health

Laboratory of Comparative Ethology (LCE), National Institute of Child Health and Human Development (NICHD)
Volunteer Guest Researcher
Fall 2003-Present

Sponsor: Stephen J. Suomi, Ph.D., Chief, LCE
Email: suomis@mail.nih.gov
Tel: 301-496-9550

American University

Behavioral Neuroscience Laboratory, Department of Psychology
Laboratory rotation and ongoing collaboration
Spring 2006-Present

Advisor: Juan M. Dominguez, Ph.D., Laboratory Director
Email: juan.dominguez@american.edu
Tel: 202-885-2681

American University

Animal Learning, Behavior, and Comparative Cognition
Laboratory rotation and ongoing collaboration
Fall 2003-Present

Advisor: Alan Silberberg, Ph.D., Professor of Psychology
Email: asilber@american.edu
Tel: 301-263-1163

National Institutes of Health

Laboratory of Clinical and Translational Studies (LCTS), Section of Primate Studies (PS), National Institute on Alcohol Abuse and Alcoholism
Biological Bases of Alcohol Abuse, ongoing collaboration
January 2006-Present

Sponsors: Christina S. Barr, V.M.D., Ph.D., Chief, LCTS-PS (current)
Email: cbarr@mail.nih.gov
Tel: 301-496-8127
J. Dee Higley, Ph.D., Chief, LCTS-PS (former)
Email: dee_higley@byu.edu
Tel: 801-422-7139

National Institutes of Health

Laboratory of Comparative Ethology, Section on Comparative Behavioral Genetics, NICHD
Intramural Research Training Assistantship (IRTA)
August 2000-September 2003

Sponsors: Dr. Stephen J. Suomi, Chief, LCE (suomis@mail.nih.gov)
Dr. Maribeth Champoux, Staff Scientist (champoux@csr.nih.gov)

Research Skills and Scientific Accomplishments

Specializing in *in vivo* laboratory animal models, with a focus on genetic and early environmental influences on the development of biobehavioral risk factors for neuropsychiatric disorders.

Intrinsically motivated and adept at working independently (Roma, 2006; Roma & Riley 2005; 2007), but also experienced and successful in multidisciplinary research endeavors as principal investigator (Roma, Flint, et al., 2006; Roma, Chen, et al., 2007; Roma, Davis, et al., submitted), collaborating team leader (Kohut et al., in preparation; Silberberg et al., in press), and contributing team member (Christensen et al., submitted; Riker et al., submitted).

Successfully trained Bachelor's- and Master's-level research associates in multiple behavioral, physiological, data analysis and manuscript preparation techniques; proactive in the scientific and professional development of junior laboratory members.

Behavioral Techniques

Extensive hands-on laboratory experience with inbred and outbred rats (*Rattus norvegicus*) as well as nonhuman primates (*Macaca mulatta* and *Cebus apella*) of both sexes and across all age ranges.

Expertise in place and taste conditioning assays; systematically developed biased and unbiased Conditioned Place Preference (CPP) methodologies for graduate laboratory (Davis et al., 2007; Roma, Huntsberry, & Riley, 2007; Roma & Riley, 2005).

Extensive experience with cross-fostering and naturalistic behavioral observation (Roma, Davis, & Riley, 2007; Roma, Ruggiero, et al., 2006). Experience and broad familiarity with conditioning- and ethologically-based laboratory models of stress, anxiety, and depression in rodents and nonhuman primates; developed a primate analogue of the Open Field test for anxiety at NIH (Roma, Champoux, & Suomi, 2006) and introduced the rat Maternal Separation and Forced Swim Test paradigms to graduate laboratory (Roma, Davis, et al., submitted; Roma, Christensen, et al., in preparation). Also familiar with rodent sexual behavior protocols and other assessments of natural rewards (Muñiz et al., in progress; Westerman et al., in progress).

Familiar with multiple animal models of drug abuse liability, including oral and operant self-administration (Andrews et al., in preparation; Roma, Rinker, et al., in progress) as well as operant- and conditioned taste aversion-based drug discrimination; introduced drug-induced locomotor activity assessments to graduate laboratory. Also familiar with behavioral economics principles and related operant, token-mediated, and free-choice experimental models (Christensen et al., submitted; Roma, Huntsberry, et al., in preparation; Roma, Silberberg, et al., 2006).

Biological Techniques

Extensive experience with subcutaneous and intraperitoneal injections in rats as well as intramuscular injections and femoral and saphenous blood, cerebrospinal fluid, and saliva sampling in Rhesus monkeys. Introduced rat tail blood sampling and core body temperature assessments to graduate laboratory (Roma, Flint, et al., 2006); developed a novel apparatus and refined methodology for non-invasive saliva sampling in primates (Roma, 2006).

Experience in rats with *in vivo* microdialysis and high-performance liquid chromatography with electrochemical detection (Roma, Dominguez, & Riley, in progress), radiofrequency and neurotoxic lesions (Dominguez et al., in progress), ovariectomy, cardiac perfusion, brain histology, and immunocytochemistry (Kohut et al., in preparation). Also familiar with indwelling intravenous catheter implantation surgery and intravenous and intramuscular injections in rats, as well as radioimmunoassay (RIA) and enzyme immunoassay (EIA) of hormones in plasma and saliva (Muñiz et al., in progress; Roma, 2006).

Honors and Awards

National Institute on Drug Abuse (NIDA)

Women & Gender Junior Investigator Travel Award for the 2007 annual meeting of the College on Problems of Drug Dependence (CPDD)

American University

College of Arts & Sciences: Mellon Foundation Graduate Student Travel Award for Fall 2004, Spring 2005, Fall 2005, Spring 2006, Fall 2006, and Spring 2007; Doctoral Dissertation Fellowship for 2007-2008 academic year

West Chester University

Invited member of Psi Chi (National Honor Society in Psychology)
Dean's List: Fall 1997, Spring 1998, Fall 1998, and Spring 1999

Service

Invited Peer Reviewer

Animal Cognition

Journal of Comparative Psychology

Neuroscience Letters

Pharmacology, Biochemistry and Behavior

Progress in Neuro-Psychopharmacology & Biological Psychiatry

American University, Department of Psychology

Senator, Graduate Student Council (Spring 2004-present)

Student Representative, Academic Integrity Committee (2005-2006 academic year)

West Chester University, Department of Psychology

Graduate Representative, WCU chapter of Psi Chi (1999-2000 academic year)

Vice President, WCU chapter of Psi Chi (1998-1999 academic year)

Professional Memberships

American Psychological Association (APA)

Graduate Student Affiliate since 1999

Division 6: Behavioral Neuroscience & Comparative Psychology

Graduate Student Affiliate since 2005

Division 28: Psychopharmacology and Substance Abuse

Graduate Student Affiliate since 2006

Association for Psychological Science (APS, formerly American Psychological Society)

Graduate Student Affiliate since 1999

American Society of Primatologists (ASP)

Student Member, 2001-2003; Student Member since 2006

Society for Neuroscience (SfN)

Graduate Student Member since 2003

American Association for the Advancement of Science (AAAS)

Student Member since 2003

American Society for Pharmacology and Experimental Therapeutics (ASPET)

Student Member since 2007

First-Authored Publications

Roma, P. G., & Riley, A. L. (2007). Cross-fostering and the extinction of cocaine's conditioned aversive effects: Evidence for gene-environment interaction. *Pharmacology, Biochemistry and Behavior*, *88*(1), 1-8.

Roma, P. G., Chen, S. A., Barr, C. S., & Riley, A. L. (2007). Dissociation between the aversive and pharmacokinetic effects of ethanol in female Fischer and Lewis rats. *Behavioural Brain Research*, *182*(1), 51-56.

Roma, P. G., Davis, C. M., & Riley, A. L. (2007). Effects of cross-fostering on cocaine-induced conditioned taste aversions in Fischer and Lewis rats. *Developmental Psychobiology*, *49*(2), 172-179.

Roma, P. G., Huntsberry, M. E., & Riley, A. L. (2007). Separation stress, litter size, and the rewarding effects of low-dose morphine in the dams of maternally separated rats. *Progress in Neuro-Psychopharmacology & Biological Psychiatry*, *31*(2), 429-433.

Roma, P. G., Silberberg, A., Huntsberry, M. E., Christensen, C. J., Ruggiero, A. M., & Suomi, S. J. (2007). Mark tests for mirror self-recognition in capuchin monkeys (*Cebus apella*) trained to touch marks. *American Journal of Primatology*, *69*(9), 989-1000.

- Roma, P. G.** (2006). The SPIT method for simultaneous and unobtrusive collection of salivary cortisol from individually housed infant monkeys. In G. P. Sackett, G. C. Ruppenthal, & K. Elias (Eds.), *Nursery Rearing of Nonhuman Primates in the 21st Century* (pp. 429-460). New York: Springer-Verlag.
- Roma, P. G.**, Champoux, M., & Suomi, S. J. (2006). Environmental control, social context, and individual differences in behavioral and cortisol responses to novelty in infant rhesus monkeys. *Child Development, 77*(1), 118-131.
- Roma, P. G.**, Flint, W. W., Higley, J. D., & Riley, A. L. (2006). Assessment of the aversive and rewarding effects of alcohol in Fischer and Lewis rats. *Psychopharmacology, 189*(2), 187-199.
- Roma, P. G.**, Ruggiero, A. M., Schwandt, M. L., Higley, J. D., & Suomi, S. J. (2006). The kids are alright: Maternal behavioral interactions and stress reactivity in infants of differentially reared rhesus monkeys. *Journal of Developmental Processes, 1*, 103-122.
- Roma, P. G.**, Silberberg, A., Ruggiero, A. M., & Suomi, S. J. (2006). Capuchin monkeys, inequity aversion, and the frustration effect. *Journal of Comparative Psychology, 120*(1), 67-73.
- Roma, P. G.**, & Riley, A. L. (2005). Apparatus bias and the use of light and texture in place conditioning. *Pharmacology, Biochemistry and Behavior, 82*, 163-169.

Other Publications

- Riley, A. L., Davis, C. M., & **Roma, P. G.** Strain differences in taste aversion learning: Implications for animal models of drug abuse. In S. Reilly and T. R. Schachtman (Eds.), *Conditioned Taste Aversion: Behavioral and Neural Processes* (in press). New York: Oxford University Press.
- Silberberg, A., **Roma, P. G.**, Huntsberry, M. E., Warren-Boulton, F. R., Sakagami, T., Ruggiero, A. M., & Suomi, S. J. (in press). On loss aversion in capuchin monkeys. *Journal of the Experimental Analysis of Behavior*.
- Davis, C. M., **Roma, P. G.**, Dominguez, J. M., & Riley, A. L. (2007). Morphine-induced place conditioning in Fischer and Lewis rats: Acquisition and dose-response in a fully biased procedure. *Pharmacology, Biochemistry and Behavior, 86*(3), 516-523.
- Lombas, A. S., Freeman, K. B., **Roma, P. G.**, & Riley, A. L. (2007). Intravenous cocaine priming reinstates cocaine-induced conditioned place preference. *Psicológica, 28*, 55-62.
- Silberberg, A., **Roma, P. G.**, Ruggiero, A. M., & Suomi, S. J. (2006). On inequity aversion in nonhuman primates. *Journal of Comparative Psychology, 120*(1), 76.

Manuscripts Submitted and In Preparation

- Christensen, C. J., Silberberg, A., Hursh, S. R., **Roma, P. G.**, & Riley, A. L. Demand for cocaine over time as assessed by the exponential model of demand. Submitted for publication
- Kohut, S. J., **Roma, P. G.**, Davis, C. M., Dominguez, J. M., & Riley, A. L. Fos expression after chronic cocaine administration in differentially reared adult male and female rats. Submitted for publication.
- Rinker, J. A., Busse, G. D., **Roma, P. G.**, Chen, S. A., Barr, C. S., & Riley, A. L. The effects of nicotine on ethanol-induced conditioned taste aversions. Submitted for publication.
- Roma, P. G.**, Davis, C. M., Kohut, S. J., Huntsberry, M. E., & Riley, A. L. Early maternal separation and the aversive effects of amphetamine in adult rats. Submitted for publication.

- Andrews, R. W., **Roma, P. G.**, Suomi, S. J., & Higley, J. D. Individual differences in hormonal fluctuations and alcohol consumption across the menstrual cycle in rhesus monkeys. Manuscript in preparation.
- Kohut, S. J., Zernig, G., **Roma, P. G.**, Rice, K. C., & Riley, A. L. Rearing condition affects cocaine discrimination and generalization to dopamine agonists in female rats as adults. Manuscript in preparation.
- Roma, P. G.**, Christensen, C. J., Rice, K. C., & Riley, A. L. Effects of offspring genotype and CRF1 antagonism on depression- and addiction-relevant phenotypes in post-partum rat dams.
- Roma, P. G.**, Huntsberry, M. E., Christensen, C. J., Ruggiero, A. M., Silberberg, A., & Suomi, S. J. Token exchange and the selective-value effect in capuchin monkeys (*Cebus apella*). Manuscript in preparation.
- Roma, P. G.**, Kohut, S. J., Cheng, K., Rice, K. C., & Riley, A. L. Differences in endogenous opioid systems determine the anti-depressant efficacy of κ -opioid antagonism during cocaine withdrawal.
- Roma, P. G.**, Schwandt, M. L., Huntsberry, M. E., Higley, J. D., Barr, C. S., & Suomi, S. J. HPA axis dysregulation in multiparous rhesus monkey mothers raising female infants: Implications for the etiology of postpartum depression. Manuscript in preparation.

Projects in Progress

- Dominguez, J. M., **Roma, P. G.**, & Riley, A. L. A possible role for the medial preoptic area in natural- and drug-induced reward.
- Muñiz, S. M., Westerman, A. T., **Roma, P. G.**, & Dominguez, J. M. Sexual competition facilitates sexual behavior in male rats.
- Roma, P. G.**, Dominguez, J. M., & Riley, A. L. Gene-environment interaction and the rewarding effects of morphine in brain and behavior.
- Roma, P. G.**, Rinker, J. A., Serafine, K. M., Davis, C. M., Dominguez, J. M., Chen, S. A., Barr, C. S., Cheng, K., Rice, K. C., & Riley, A. L. The κ -opioid system as an interface for gene-environment interaction effects on voluntary alcohol consumption.
- Westerman, A. T., **Roma, P. G.**, & Dominguez, J. M. The antiepileptic Primidone impairs male rat copulatory behavior.

Presentations and Published Abstracts

- Roma, P. G.**, Huntsberry, M. E., Schwandt, M. L., Barr, C. S., & Suomi, S. J. (2007, November). *HPA axis reactivity in primiparous and multiparous rhesus monkey mothers: Implications for the biological bases of post-partum depression*. Poster session presented at the annual meeting of the Society for Neuroscience, San Diego, CA.
*Featured in the SfN Public Education and Communication Committee's *Neuroscience 2007* press book.
- Westerman, A. T., **Roma, P. G.**, & Dominguez, J. M. (2007, November). *The antiepileptic primidone impairs male sexual behavior*. Poster session presented at the annual meeting of the Society for Neuroscience, San Diego, CA.
- Riley, A. L., Davis, C. M., & **Roma, P. G.** (2007, July). *Epigenetic factors in drug use and abuse*. Invited presentation at University of Granada (Granada, Spain).

- Riley, A. L., Davis, C. M., & **Roma, P. G.** (2007, July). *Epigenetic factors in drug use and abuse*. Invited presentation at Universitat Rovira I Virgili (Reus, Spain).
- Riley, A. L., Davis, C. M., & **Roma, P. G.** (2007, July). *Epigenetic factors in drug use and abuse*. Invited presentation at University of Guelph (Guelph, Ontario, Canada).
- Christensen, C. J., Silberberg, A., Hursh, S. R., Huntsberry, M. E., **Roma, P. G.**, & Riley, A. L. (2007, June). *The reinforcing strength of cocaine is less than food but increases with increased cocaine self-administration experience as measured using a recently developed exponential model of demand*. Paper presented at the annual meeting of the International Society Group Investigating Drugs as Reinforcers, Quebec City, QC, Canada.
- Huntsberry, M. E., **Roma, P. G.**, Christensen, C. J., Ruggiero, A. M., & Suomi, S. J. (2007, June). *Token exchange and the selective-value effect in capuchin monkeys (Cebus apella)*. Poster session presented at the annual meeting of the American Society of Primatologists, Winston-Salem, NC.
- Roma, P. G.**, Chen, S. A., Barr, C. S., & Riley, A. L. (2007, June). *Dissociation between physiological and motivational effects of alcohol in female Fischer & Lewis rats*. Poster session presented at the annual meeting of the College on Problems of Drug Dependence, Quebec City, QC, Canada.
- Riley, A. L., & **Roma, P. G.** (2006, August). *Interactions of the aversive and rewarding properties of drugs: Implications for drug acceptability*. Festschrift for Vincent M. LoLordo (Halifax, Nova Scotia, Canada).
- Roma, P. G.**, Ruggiero, A. M., Schwandt, M. L., Higley, J. D., & Suomi, S. J. (2006, August). *Does practice make perfect? Maternal behavioral interactions and stress reactivity in infants of primiparous and multiparous rhesus monkeys (Macaca mulatta)*. Poster session presented at the annual meeting of the American Society of Primatologists, San Antonio, TX.
- Ruggiero, A. M., **Roma, P. G.**, Schwandt, M. L., Higley, J. D., & Suomi, S. J. (2006, August). *Behavioral interactions and stress reactivity in infants of differentially reared rhesus monkeys (Macaca mulatta)*. Poster session presented at the annual meeting of the American Society of Primatologists, San Antonio, TX.
- Huntsberry, M. E., Ruggiero, A. M., Christensen, C. J., **Roma, P. G.**, Silberberg, A., & Suomi, S. J. (2006, August). *Operant conditioning fails to facilitate mirror self-recognition in capuchin monkeys (Cebus apella)*. Poster session presented at the annual meeting of the American Society of Primatologists, San Antonio, TX.
- Roma, P. G.**, Davis, C. M., & Riley, A. L. (2006, June). *Acquisition of drug-induced conditioned place preference in Fischer and Lewis rats*. Poster session presented at the annual meeting of the College on Problems of Drug Dependence, Scottsdale, AZ.
- Roma, P. G.**, & Riley, A. L. (2005, November). *Assessment of the aversive and rewarding effects of ethanol in the Fischer and Lewis rat strains*. Poster session presented at the annual meeting of the Society for Neuroscience, Washington, DC.
- Davis, C. M., **Roma, P. G.**, & Riley, A. L. (2005, August). *Cross-fostering effects on the extinction of cocaine-induced taste aversions in the Fischer and Lewis rat strains*. NIDA/NIAAA/APA (Divisions 28 & 50) Early Career Investigators Poster Session at the annual meeting of the American Psychological Association, Washington, DC.
- Roma, P. G.**, & Riley, A. L. (2005, August). *"Double-biased" place conditioning for assessing drug reward and aversion*. NIDA/NIAAA/APA (Divisions 28 & 50) Early Career Investigators Poster Session at the annual meeting of the American Psychological Association, Washington, DC.

- Ruggiero, A. M., **Roma, P. G.**, Silberberg, A., & Suomi, S. J. (2005, August). *Individual reward history, social comparison, and rejection of differentially valued goods in Capuchin monkeys (Cebus apella)*. Poster session presented at the annual meeting of the American Society of Primatologists, Portland, OR.
- Davis, C. M., **Roma, P. G.**, Keeler, M. A., & Riley, A. L. (2005, June). *Genetic strain, maternal environment, and biological sex interact to affect cocaine-induced taste aversions in Fischer and Lewis rats*. Poster session presented at the annual meeting of the College on Problems of Drug Dependence, Orlando, FL.
- Roma, P. G.**, & Riley, A. L. (2005, June). *Thinking outside the box: A case of apparatus bias resolution for place conditioning*. Poster session presented at the annual meeting of the College on Problems of Drug Dependence, Orlando, FL.
- Gura, T., **Roma, P. G.**, Barr, C., Becker, M., Higley, S. B., Suomi, S. J., & Higley, J. D. (2003, August). *HPA axis responses of rhesus monkey mothers during separations vary from their first to second infants*. Poster session presented at the annual meeting of the American Society of Primatologists, Calgary, AB.
- Shannon, C., Champoux, M., **Roma, P. G.**, & Suomi, S. J. (2003, August). *The effects of handling of surrogate-peer reared rhesus monkey (Macaca mulatta) infants on ACTH*. Poster session presented at the annual meeting of the American Society of Primatologists, Calgary, AB.
- Wojteczko, K., Graham, T., **Roma, P.**, Lindell, S., Barr, C., Suomi, S., & Higley, J. D. (2003, August). *The effects of stress, and the stability of individual differences in alcohol consumption*. Poster session presented at the annual meeting of the American Society of Primatologists, Calgary, AB.
- Roma, P.**, Champoux, M., Shannon, C., & Suomi, S. J. (2002, June). *Possible stable effects of early prolonged controllability on responses to a novel environment in infant rhesus monkeys (Macaca mulatta)*. Poster session presented at the annual meeting of the American Society of Primatologists, Oklahoma City, OK.
- Roma, P.**, Lowery, T., Champoux, M., & Suomi, S. J. (2002, June). *A simple apparatus for simultaneously and unobtrusively collecting saliva samples from individually housed infant rhesus monkeys (Macaca mulatta)*. Poster session presented at the annual meeting of the American Society of Primatologists, Oklahoma City, OK.
- Champoux, M., Hommer, R., **Roma, P.**, Shannon, C., & Suomi, S. (2001, August). *Controllability of the environment in surrogate-peer reared rhesus monkey infants*. Poster session presented at the annual meeting of the American Society of Primatologists, Savannah, GA.
- Hommer, R., Rio, D., Momenan, R., **Roma, P.**, Champoux, M., Higley, S., Higley, J., Hommer, D., & Suomi, S. (2001, August). *Sex differences in brain volume of infant rhesus macaques*. Poster session presented at the annual meeting of the American Society of Primatologists, Savannah, GA.
- Roma, P.**, & Renner, C. H. (2000, March). *The development of computer literacy in college students*. Paper presented at the annual meeting of the Eastern Psychological Association, Baltimore, MD.
- Shaffer, L. S., **Roma, P.**, Renner, C. H., & Mancill, B. (2000, March). *Creation and validation of the recipe knowledge index*. Poster session presented at the annual meeting of the Eastern Psychological Association, Baltimore, MD.