CURRICULUM VITA

Jacqueline N. Crawley, Ph.D.

Professional Address:	Laboratory of Behavioral Neuroscience Intramural Research Program National Institute of Mental Health Building 35 Room 1C-903 Bethesda, MD 20892-3730 USA Telephone 301-496-7855 FAX 301-480-4630 E-mail: crawleyj@intra.nimh.nih.gov Website: http://intramural.nimh.nih.gov/lbn
Place and date of birth:	Philadelphia, PA, USA, June 14, 1950
Home address:	6203 Stratford Road, Chevy Chase, MD 20815 USA, 301-951-0655

EDUCATION

1967-71	B.A., Biology, University of Pennsylvania, Philadelphia, PA
1971-76	Ph.D., Zoology, University of Maryland, College Park, MD
1976-79	Postdoctoral, Yale University, New Haven, CT

PROFESSIONAL EMPLOYMENT

2003-present	Chief, Laboratory on Behavioral Neuroscience Intramural Research Program, National Institute of Mental Health, Bethesda, MD
2003-present	Adjunct Professor, Department of Psychiatry University of North Carolina School of Medicine at Chapel Hill
2003-present	Research Professor, Department of Psychology University of North Carolina at Chapel Hill
2001-2003	Chief, Section on Behavioral Genomics IRP, National Institute of Mental Health, Bethesda, MD
1993-2000	Chief, Section on Behavioral Neuropharmacology Experimental Therapeutics Branch, Intramural Research Program National Institute of Mental Health, Bethesda, MD
1996-Present	Adjunct Professor, Department of Pharmacology

Georgetown University School of Medicine, Washington, DC

1993 Acting Deputy Director, Intramural Research Program National Institute of Mental Health, Bethesda, MD 1983-93 Chief, Unit on Behavioral Neuropharmacology Clinical Neuroscience Branch/Experimental Therapeutics Branch National Institute of Mental Health, Bethesda, MD 1981-83 Senior Neurobiologist, Central Research and Development E.I. DuPont de Nemours and Company, Wilmington, DE Pharmacology Research Associate Program Training Fellow 1979-81 Clinical Psychobiology Branch, National Institute of Mental Health, and National Institute of General Medical Sciences, Bethesda, MD 1976-79 **Biological Sciences Training Program Fellow** Neuropychopharmacology Unit, Department of Psychiatry Yale University School of Medicine, New Haven, CT

AWARDS AND HONORS

- 2006 Howard Hughes Medical Research Institute Preceptor Award, Student Internship Program
 2005 Fleur Strand Lecture Award, Summer Neuropeptide Conference
- 2005 Marjorie A. Myers Lifetime Achievement Award, International Behavioral Neuroscience Society
- 2004 Society for Neuroscience Service Award, Chair of Membership Committee, 2001-2004
- 2003-7 Autism Center STAART Grant U54 MH66418, Project 4 Investigator, Mouse Behavior and Genetics
- 2003 Howard Hughes Medical Research Institute Preceptor Award, Student Internship Program
- 2003 Gladstone Institute of Neurological Disease Distinguished Scholar Award
- 2002 NIMH Director's Merit Award
- 2001 U.S. Department of Health and Human Services, Public Health Service, National Institutes of Health, Special Act or Service Award in Recognition and Appreciation of Special Achievement
- 2000 President, International Behavioral Neuroscience Society

2000	ISI Citation Classic Crawley and Corwin, Biological actions of cholecystokinin, Peptides 14:731-755, 1994
	Cruwiey and Corwin, Biological actions of Cholecyslokinin, 1 epilaes 14.751-755, 1994
1999	National Institute of Mental Health Special Service Award
1999	Summer Neuropeptide Conference Organizers Award
1998	Howard Hughes Medical Research Institute Student and Teacher Internship Award
1993	Mathilde Solowey Lecture Award in Neuroscience
1993	National Institute of Mental Health Special Service Award
<i>19</i> 87	President, Potomac Chapter, Society for Neuroscience
1979	Pharmacology Research Associate Training award, National Institute of General Medical Sciences
1976	Biological Sciences Training Program Research award, Yale University School of Medicine
1975	Graduate Research Fellowship, University of Maryland
1971	Graduate Teaching Fellowship, University of Maryland
1967	Mayor's Scholarship, University of Pennsylvania

EDITORIAL BOARDS

Editorships:

Editor, Neuropeptides

Editor, Behavioral Neuroscience Chapter 8 Wiley Current Protocols in Neuroscience (1997-2004)

Editorial Board memberships:

Autism Research (2007-present) Behavioral Neuroscience (2002-present) Behavioural Brain Research (2003-present) Current Psychiatry Reviews (2004-present) European Journal of Pharmacology (past member) Depression and Anxiety(1994-2004) Drug Discovery Today: Disease Mechanisms (2004-present) European Journal of Pharmacology (1994-2002) Frontiers in Behavioral Neuroscience (2007-present) Genes, Brain and Behavior (2001-present) Journal of Molecular Neuroscience (1999-present) Journal of Neuroendocrinology (1988-1996) Journal of Pharmacology and Experimental Therapeutics (1999-2006) Neuropsychopharmacology (1999-2002) Pharmacology Biochemistry and Behavior (1988-present) Psychopharmacology (1999-present) The Open Pharmacology Journal (2007-present) Reviews in the Neurosciences (2005-present) Trends in Pharmacological Sciences (1990-present)

PROFESSIONAL SERVICE: SCIENTIFIC SOCIETIES

2007-2009	Chair, Program Committee, International Behavioral Neuroscience Society
2004-2006	Member, Program Committee, American College of Neuropsychopharmacology
2004	Co-Organizer, Galanin 2004, Third International Conference on Galanin and its Receptors, San Diego, CA
2003–2005	Member, Board of Trustees, Association for Assessment and Accreditation of Laboratory Animal Care International, Representative from the International Behavioral Neuroscience Society
2001-2004	Co-Chair, Membership Committee, Society for Neuroscience
2003-present	Program Committee member, International Behavioral Neuroscience Society
2000-2001	President, International Behavioral Neuroscience Society
2000-2001	Program Committee member, International Behavioural and Neural Genetics Society
1993-1998	Organizer, Summer Neuropeptide Conference annual meetings
1998-2004	Membership Committee, member, Society for Neuroscience
1995-2004	Council Member, International Behavioral Neuroscience Society
1994-present	Council Member, International Neuropeptide Society
1996-1999	Committee on the Use of Animals, member, American College of Neuropsychopharmacology
1991-1994	Credentials Committee, member, American College of Neuropsychopharmacology

PROFESSIONAL SERVICE: GRANT REVIEWING

Ongoing	Ad Hoc for Grant Review Committees including:
	NIMH, NICHD, NIDA, NIAA, NIA, VA Canadian Medical Research Council, European Science 2000, US-Israeli Binational Science Foundation, United Kingdom Medical Research Council
1989-1992	Panel Member, National Science Foundation Neural Mechanisms of Behavior Review Panel

PROFESSIONAL SERVICE: INTRAMURAL

Chair, Behavior Subcommittee, NIH Neuroscience Seminar Series, 2007-present

NIMH IRP Tenure and Promotions Committee, 2007-present

Trans-NIH IRP Initiatives Committee, 2006-present

Behavioral Investigator Review Panel, NIH Tenure Committee, 2004-present

Porter Neuroscience Research Center building design consultant, 2000-present

NIH Committee for Priority Setting for Mouse Genomic and Genetic Resources, member, 2000-present

NIMH IRP Tenure and Promotions Committee, member, 1999-2003

NIH Behavioral and Social Sciences Research Coordinating Committee, Intramural Representative, 1998-2002

NIMH Animal Care and Use Committee Chair, 1998-1999 Chair, 1991-1992 Member, 1987-1992

NIMH Representative, 10A Animal Facilities Users Committee, 1990-2002

NIMH Women Scientists Group Chair, 1991-92 Chair, 1994-96 Member, 1990-present

NIMH Representative, NIH Women Scientists Advisory Committee, 1994-96

Working Group on Behavioral Assessment of Mutant Mice, NIH Office of

Behavioral and Social Sciences Research, Chair, 1997-1999

Representative on Behavioral Studies, Mouse Phenotyping Facility Proposal, NIH Shared Resources Subcommittee of Scientific Directors, 1997-1998

Tenure-Track and Senior Search Committees NIMH, member, 1996-present NIAAA, Chair, 1996, member 2003 NIDA, member, 2003

TEACHING

Member, Curriculum in Neurobiology (graduate training program), University of North Carolina at Chapel Hill

Lecturer, Behavioral Neuroscience, University of North Carolina Department of Psychology, 2004-present

Lecturer, Neurobiology of Mental Illness, FAES Graduate Program at NIH, 2002-present

Lecturer, Georgetown University Graduate Course in Neuropharmacology, 1991-present

Lecturer, George Washington University Graduate Course in Neuropharmacology, 1988-present

Lecturer, New Tools in Biological Psychiatry, FAES Graduate Program at NIH, 2002-present, 1984-86, 1979-81

Member of Ph.D. Thesis Committees:

Linda Weiss-Wunder, University of Pennsylvania, 1990 Sharon Richardson, Howard University, 1991 Christian Heidebreder, University of Louvain, Belgium, 1992 Muriel Derrain, University Renes Descartes, France, 1992 James Auta, Georgetown University, 1993 Kimberly Simpson, Hahnemann University, 1998 Ruth Barientos, George Washington University, 2000 David Ault, George Washington University, 2000 Annika Thorsell, Karolinska Institutet, 2000 Edward Billingslea, Georgetown University, 2004-present Elizabeth Hess, University of North Carolina, 2004-present

MENTORING, CONSULTANTSHIPS, SCIENTIFIC ADVISORY BOARDS

Mentor, NARSAD Award to Mark Zylka, Neuroscience Center, University of North Carolina, 2006-2008

Member, Scientific Advisory Board, Alzheimer Research Consortium, New York, NY, 2003

Member, Scientific Advisory Board, Gladstone Institute of Neurological Disease, San Francisco, CA, 2003

Consultant to Center Grant, Johns Hopkins University, Dr. John Gearhardt, Principal Investigator, 1998-2001

Consultant, Helicon Inc., 1997-2000

Consultant, R.W. Johnson Pharmaceutical Research Institute, 1996-99

Consultant to Program Project Grant, Georgetown University, Dr. Richard Gillis, Principal Investigator, 1992-96

PROFESSIONAL AFFILIATIONS

American College of Neuropsychopharmacology Association for Psychological Science (Fellow) Behavior Genetics Association European Neuropeptide Club International Behavioral and Neural Genetics Society International Behavioral Neuroscience Society (Fellow) International Neuropeptide Society (Founding Member) Society for Behavioral Neuroendocrinology Society for Neuroscience

NIH COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENT

Pharmacopeia, Inc., Cranbury, NJ, 1999-2000 "Development of Biologically Active, Subtype-Selective, Nonpeptide Galanin Receptor Agonists and Antagonists"

NIH ROYALTIES RECEIVED

Dishevelled-1 null mutant mice licensed by: Merck Neuroscience Research Centre, Terlings Park, Harlow, England, UK, 1999 Neurosciences Research, SmithKline Beecham, Harlow, England, UK, 2000

PEER-REVIEWED PUBLICATIONS

- 1. Lerner JN, Mellen SA, Waldron I, Factor RM: Neural redundancy and regularity of swimming beats in the scyphozoan medusae. *J Exp Biol* 55:177-185, 1971.
- 2. Crawley JN, Schleidt WM, Contrera JF: Does social environment decrease propensity to fight in male mice? *Behav Biol* 15:73-83, 1975.
- 3. Crawley JN and Contrera JF: Intraventricular 6-hydroxydopamine lowers isolationinduced fighting behavior in male mice. *Pharmacol Biochem Behav* 4:381-384, 1976.
- 4. Crawley JN, Hattox SE, Maas JW, Roth RH: 3-Methoxy-4-hydroxyphenethyleneglycol increase in plasma after stimulation of the nucleus locus coeruleus. *Brain Res* 141:380-384, 1978.
- 5. Crawley JN, Maas JW, Roth RH: Increase in plasma MHPG following stimulation of the nucleus locus coeruleus. *Psychopharm Bull* 15:27-29, 1978.
- 6. Crawley JN, Laverty R, Roth RH: Clonidine reverses the increase of norepinephrine metabolite 3-methoxy-4-hydroxyphenethyleneglycol (MHPG) during morphine withdrawal in rats. *Eur J Pharmacol* 57:247-259, 1979.
- 7. Crawley JN, Roth RH, Maas JW: Locus coeruleus stimulation increases noradrenergic metabolite levels in rat spinal cord. *Brain Res* 166:180-184, 1979.
- Crawley JN and Goodwin FK: Preliminary report of a simple animal behavior model for the anxiolytic effects of benzodiazepines. *Pharmacol Biochem Behav* 13:167-170, 1980.
- 9. Crawley JN, Maas JW, Roth RH: Evidence against specificity of electrical stimulation of the nucleus locus coeruleus in activating the sympathetic nervous system in the rat. *Brain Res* 183:301-311, 1980.
- 10. Crawley JN, Roth RH, Maas JW: Biochemical evidence for simultaneous activation of multiple locus coeruleus efferents. *Life Sci* 26:1373-1378, 1980.
- 11. Schleidt WM and Crawley JN: Patterns in the behavior of organisms. *J Soc Biol St*ruct 3:1-15, 1980.
- 12. Crawley JN: Neuropharmacologic specificity of a simple animal model for the behavioral actions of benzodiazepines. *Pharmacol Biochem Behav* 15:695-699, 1981.
- 13. Crawley JN, Hays SE, O'Donohue TL, Paul SM: Neuropeptide modulation of social and exploratory behaviors in laboratory rodents. *Peptides* 2:123-129, 1981.
- 14. Crawley JN, Hays SE, Paul SM: Vagotomy abolishes the inhibitory effects of cholecystokinin on rat exploratory behavior. *Eur J Pharmacol* 73:379-380, 1981.
- 15. Crawley JN, Hays SE, Paul SM, Goodwin FK: Cholecystokinin reduces exploratory behavior in mice. *Physiol Behav* 27:408-411, 1981.

- 16. Crawley JN, Marangos PJ, Paul SM, Skolnick P, Goodwin FK: Purine benzodiazepine interaction: Inosine reverses diazepam-induced stimulation of mouse exploratory behavior. *Science* 22:725-727, 1981.
- 17. Crawley JN, Patel J, Marangos PJ: Behavioral characterization of two long-lasting adenosine analogs: Sedative properties and interaction with diazepam. *Life Sci* 29:2623-2630, 1981.
- Skolnick P, Paul SM, Crawley JN, Rice K, Barker S, Weber R, Cain M, Cook J: 3-Hydroxymethyl-beta-carboline antagonizes some pharmacologic actions of diazepam. *Eur J Pharmacol* 69:525-528, 1981.
- 19. Swann AC, Crawley JN, Grant SJ, Maas JW: Noradrenergic stimulation in vivo increases (Na⁺,K⁺)-adenosine triphosphate activity. *Life Sci* 28:251-256, 1981.
- Cain M, Wever RW, Guzman F, Cook JM, Barker SA, Rice KC, Crawley JN, Paul SM, Skolnick P: Beta-carbolines: Synthesis, neurochemical, and pharmacological actions on brain benzodiazepine receptors. *J Med Chem* 25:1081-1091, 1982.
- 21. Crawley JN and Davis LG: Baseline exploratory activity predicts anxiolytic responsiveness to diazepam in five mouse strains. *Brain Res Bull* 8:609-612, 1982.
- 22. Crawley JN, Marangos JN, Stivers PJ, Goodwin FK: Chronic clonazepam administration induces benzodiazepine receptor subsensitivity. *Neuropharmacology* 21:85-90, 1982.
- 23. Crawley JN, Rojas-Ramirez JA, Mendelson WB: The role of central and peripheral cholecystokinin in mediating appetitive behaviors. *Peptides* 3:535-538, 1982.
- 24. Crawley JN, Szara S, Creveling CR, Pryor GT: Development and evaluation of a video-monitored, computer-assisted system for automatic recording of social and exploratory behavior of small animals. *J Neurosci Methods* 5:235-247, 1982.
- 25. Marangos PJ and Crawley JN: Chronic benzodiazepine treatment increases [³H] muscimol binding in mouse brain. *Neuropharmacology* 21:81-84, 1982.
- 26. Moody TW, Crawley JN, Jensen RT: Pharmacology and neurochemistry of bombesinlike peptides. *Peptides* 3:559-563, 1982.
- 27. Rojas-Ramirez JA, Crawley JN, Mendelson WB: Electroencephalographic analysis of the sleep-inducing actions of cholecystokinin. *Neuropeptides* 3:129-138, 1982.
- 28. Blumstein LK and Crawley JN: Further characterization of a simple, automated exploratory model for the anxiolytic effects of benzodiazepines. *Pharmacol Biochem Behav* 18:37-40, 1983.
- 29. Charlton CG, Miller RL, Crawley JN, Handelmann GE, O'Donohue TL: Secretin modulation of behavioral and physiological functions in the rat. *Peptides* 4:739-742, 1983.

- 30. Crawley JN: Divergent effects of cholecystokinin, bombesin, and lithium on rat exploratory behaviors. *Peptides* 4:405-410, 1983.
- 31. Crawley JN: Preliminary report of a new rodent separation model of depression. *Psychopharm Bulletin* 19:537-541, 1983.
- 32. Crawley JN and Beinfeld MC: Rapid development of tolerance to the behavioral actions of cholecystokinin. *Nature* 302:703-706, 1983.
- 33. Crawley JN and Moody TW: Anxiolytics block excessive grooming behavior induced by ACTH 1-24 and bombesin. *Brain Res Bull* 10:399-401, 1983.
- 34. Crawley JN, Patel J, Marangos PJ: Adenosine uptake inhibitors potentiate the sedative effects of adenosine. *Neurosci Lett* 36:169-174, 1983.
- 35. Crawley JN and Schwaber JS: Nucleus tractus solitarius lesions block the behavioral actions of cholecystokinin. *Peptides* 4:743-747, 1983.
- Skolnick P, Paul S, Crawley J, Lewin E, Lippa A, Clody D, Irmscher K, Saiko O, Minck KO: Antagonism of the anxiolytic action of diazepam and chlordiazepoxide by two novel pyrazolopyridines, EMD 39593 and EMD 41717. *Eur J Pharmacol* 88:319-327, 1983.
- 37. Crawley JN: Cholecystokinin accelerates the rate of habituation to a novel environment. *Pharmacol Biochem Behav* 20:23-27, 1984.
- 38. Crawley JN: Evaluation of a proposed hamster separation model of depression. *Psychiatry Res* 11:35-47, 1984.
- 39. Crawley JN: Investigation of a new rodent separation model of depression. *Prog Neuropsychopharmacol Biol Psychiatry* 8:447-457, 1984.
- 40. Crawley JN, Blumstein LK, Baldino F: Anxiolytic-like properties of fominoben. *Eur J Pharmacol* 97:277-281, 1984.
- 41. Crawley JN, Hommer DW, Skirboll LR: Behavioral and neurophysiological evidence for a facilatory interaction between co-existing transmitters: cholecystokinin and dopamine. *Neurochem Int* 6:755-760. 1984.
- 42. Crawley JN, Kiss JZ, Mezey E: Bilateral midbrain transections block the behavioral effects of cholecystokinin on feeding and exploration in rats. *Brain Res* 322:316-321, 1984.
- 43. Crawley JN, Ninan PT, Pickar D, Chrousos GP, Skolnick P, Paul SM: Behavioral and physiological responses to benzodiazepine receptor antagonists. *Psychopharmacol Bull* 403:20-24, 1984.
- 44. Crawley JN and Schwaber JS: Abolition of the behavioral effects of cholecystokinin following bilateral radio frequency lesions of the parvicellular subdivision of the nucleus tractus solitarius. *Brain Res* 295:289-299, 1984.

- Crawley JN, Skolnick P, Paul SM: Absence of intrinsic actions of benzodiazepine antagonists on a mouse exploratory model of anxiety. *Neuropharmacology* 23:531-537, 1984.
- Crawley JN, St Pierre S, Gaudreau P: Analysis of the behavioral activity of C- and Nterminal fragments of cholecystokinin octapeptide. *J Pharmacol Exp Therap* 230:438-444, 1984.
- Hirsch MD, O'Donohue TL, Wilson R, Sawyer TK, Hruby VJ, Hadley ME, Cody Wl, Knittel JJ, Crawley JN: Structural-conformational modifications of α-MSH/ACTH4-10 provide melanaotropin analogues with highly potent behavioral activities. *Peptides* 5:1197-1201, 1984.
- 48. Skolnick P, Ninan P, Insel T, Crawley JN, Paul S: A novel chemically-induced animal model of human anxiety. *Psychopathology* 17:25-36, 1984.
- Squires RF, Saederup E, Crawley JN, Skolnick P, Paul SM: Convulsant potencies of tetrazoles are highly correlated with actions on GABA/benzodiazepine/picrotoxin receptor complexes in brain. *Life Sci* 35:1439-1444, 1984.
- 50. Yachnis AT, Crawley JN, Jensen RT, Moody TW: The antagonism of bombesin in the CNS by substance P analogues. *Life Sci* 35:1963-1969, 1984.
- 51. Crawley JN: A monoamine oxidase inhibitor reverses the "separation syndrome" in a new hamster separation model of depression. *Eur J Pharmacol* 112:129-133, 1985.
- 52. Crawley JN: Cholecystokinin potentiates dopamine-mediated behaviors in the nucleus accumbens, a site of CCK-DA coexistence. *Psychopharmacol Bull* 21:523-527, 1985.
- 53. Crawley JN: Clarification of the behavioral functions of peripheral and central cholecystokinin: two separate pools. *Peptides* 6:129-136, 1985.
- 54. Crawley JN: Neurochemical investigation of the afferent pathway from the vagus nerve to the nucleus tractus solitarius in mediating the "satiety syndrome" induced by systemic cholecystokinin. *Peptides* 6:133-138, 1985.
- 55. Crawley JN, Hommer DW, Skirboll LR: Topographical analysis of nucleus accumbens sites at which cholecystokinin potentiates dopamine induced hyperlocomotion in the rat. *Brain Res* 355:337-341, 1985.
- 56. Crawley JN and Kiss JZ: Paraventricular nucleus lesions abolish the inhibition of feeding induced by systemic cholecystokinin. *Peptides* 6:927-935, 1985.
- 57. Crawley JN, Ninan PT, Pickar D, Chrousos GP, Linnoila M, Skolnick P, Paul SM: Neuropharmacological antagonism of the β-carboline-induced "anxiety" response in rhesus monkeys. *J. Neurosci* 5:477-485, 1985.
- Crawley JN, Olschowka JA, Diz DI, Jacobowitz DM: Behavioral investigation of the coexistence of substance P, corticotropin releasing factor, and acetylcholinesterase in lateral dorsal tegmental neurons projecting to the medial frontal cortex of the rat. *Peptides* 6:891-901, 1985.

- 59. Crawley JN, Stivers JA, Blumstein LK, Paul SM: Cholecystokinin potentiates dopamine-mediated behaviors: Evidence for modulation specific to a site of coexistence. *J Neurosci* 5:1972-1983, 1985.
- 60. Drugan RC, Maier SF, Skolnick P, Paul SM, Crawley JN: An anxiogenic benzodiazepine receptor ligand induces learned helplessness. *Eur J Pharmacol* 113:453-457, 1985.
- 61. Hommer DW, Palkovits M, Crawley JN, Paul SM, Skirboll LR: CCK-induced excitation in the substantia nigra: Evidence for peripheral and central components. *J Neurosci* 5:1387-1392, 1985.
- Angel I, Kiss A, Stivers JA, Skirboll LR, Crawley JN, Paul SM: Regulation of [³H]mazindol binding to subhypothalamic areas: Involvement in glucoprivic feeding. *Brain Res Bull* 17:873-877, 1986.
- 63. Crawley JN, Glowa JR, Majewska MD, Paul SM: Anxiolytic activity of an endogenous adrenal steroid. *Brain Res* 398:382-385, 1986.
- 64. Crawley JN, Stivers JA, Hommer DW, Skirboll LR, Paul SM: Antagonists of central and peripheral behavioral actions of cholecystokinin. *J Pharmacol Exp Ther* 236:320-330, 1986.
- 65. Crawley JN, Stivers JA, Martin JV, Mendelson WB: Cholinergic induction of seizures in the rat prefrontal cortex. *Life Sci* 38:2347-2354, 1986.
- 66. Drugan RC, Basile AS, Crawley JN, Paul SM, Skolnick P: Inescapable shock reduces [³H]Ro5-4864 binding to "peripheral-type" benzodiazepine receptors in the rat. *Pharmacol Biochem Behav* 24:1673-1677, 1986.
- 67. Drugan RC, Skolnick P, Paul SM, Crawley JN: Low doses of muscimol produce anticonflict actions in the lateral septum of the rat. *Neuropharmacology* 25:203-205, 1986.
- 68. Hommer DW, Stoner G, Crawley JN, Paul SM, Skirboll LR: Cholecystokinindopamine coexistence: electrophysiological actions corresponding to cholecystokinin receptor subtype. *J Neurosci* 6:3039-3042, 1986.
- 69. Smith CB and Crawley JN: Anxiolytic action of CGS 9896 on mouse exploratory behavior. *Eur J Pharmacol* 132:259-262, 1986.
- 70. Suzdak PD, Glowa JR, Crawley JN, Schwartz RD, Skolnick P, Paul SM: A selective imidazobenzodiazepine antagonist of ethanol in the rat. *Science* 234:1243-1247, 1986.
- Wolkowitz O, Sutton M, Koulu M, LaBarca R, Wilkinson L, Doran A, Pickar D, Crawley J: Chronic corticosterone administration in rats: Behavioral and biochemical evidence of increased central dopaminegic activity. *Eur J Pharmacol* 122:329-338, 1986.

- 72. Angel I, Stivers JA, Paul SM, Crawley JN: Site of action of anorectic drugs: Glucoprivic versus food deprivation induced-feeding. *Pharmacol Biochem Behav* 27:291-297, 1987.
- 73. Blumstein LK, Crawley JN, Davis LG, Baldino F: Neuropeptide modulation of apomorphine-induced stereotyped behavior. *Brain Res* 404:293-300, 1987.
- 74. Drugan RC, Basile AS, Crawley JN, Paul SM, Skolnick P: "Peripheral" benzodiazepine binding sites in the Maudsley reactive rat: Selective decrease confined to peripheral tissues. *Brain Res Bull* 18:143-145, 1987.
- 75. Drugan RC, Crawley JN, Paul SM, Skolnick P: Buspirone attenuates learned helplessness behavior in rats. *Drug Devel Res* 10:63-67, 1987.
- 76. Kaltwasser MT and Crawley JN: Oxytocin and cholecystokinin induce grooming behavior in the ventral tegmentum of the rat. *Brain Res* 426:1-7, 1987.
- 77. Kaltwasser MT, Petrack B, Crawley JN: Potency of CR 1409, a new proglumide analog, on cholecystokinin-mediated behaviors and receptor binding. *Neurochem Int* 10:547-553, 1987.
- 78. Crawley JN: Attenuation of dark-induced hyperlocomotion by a cholecystokinin antagonist in the nucleus accumbens. *Brain Res* 473:398-400, 1988.
- 79. Drugan RC, Basile AS, Crawley JN, Paul SM, Skolnick P: Characterization of stressinduced alterations in [³H]Ro5-4864 binding to peripheral benzodiazepine receptors in rat heart and kidney. *Pharmacol Biochem Behav* 30:1015-1020, 1988.
- 80. Khosla S and Crawley JN: Potency of L-364,718 as an antagonist of the behavioral effects of peripherally administered cholecystokinin. *Life Sci* 42:153-159, 1988.
- 81. Mastropaolo J and Crawley JN: Behavioral evidence for increased cholinergic receptor sensitivity after nucleus basalis magnocellularis lesions in the rat. *Eur J Pharmacol* 153:301-304, 1988.
- 82. Mastropaolo J, Nadi NS, Ostrowski NL, Crawley JN: Galanin antagonizes acetylcholine on a memory task in basal forebrain-lesioned rats. *Proc Natl Acad Sci USA* 85:9841-9845, 1988.
- Merali Z, Merchant CA, Crawley JN, Coy DH, Heinz-Erian P, Jensen RT, Moody TW: (D-Phe¹²) bombesin and substance P analogues function as central bombesin receptor antagonists. *Synapse* 2:282-287, 1988.
- 84. Stivers JA and Crawley JN: Substance P antagonists block carbachol-induced "boxing" behavior at a site of coexistence in the rat prefrontal cortex. *Peptides* 9:117-121, 1988.
- 85. Stivers JA, Kaltwasser MT, Hill PS, Hruby VJH, Crawley JN: Ventral tegmental oxytocin induces grooming. *Peptides* 9:223-231, 1988.
- Stivers JA, Skirboll LR, Long R, Crawley JN: Anatomical analysis of frontal cortex sites at which carbachol induces "boxing"-like seizures in the rat. *Pharmacol Biochem Behav* 30:129-136, 1988.

- 87. Suzdak PD, Glowa JR, Crawley JN, Skolnick P, Paul SM: Response to KT Britton et al. *Science* 239:649-650, 1988.
- 88. Suzdak PD, Paul SM, Crawley JN: Effects of Ro15-4513 and other benzodiazepine receptor inverse agonists on alcohol-induced intoxication in the rat. *J Pharmacol Exp Ther* 245:880-885, 1988.
- 89. Crawley JN: Microinjection of cholecystokinin into the rat ventral tegmental area potentiates dopamine-induced hypolocomotion. *Synapse* 3:346-355, 1989.
- 90. Drugan RC, Skolnick P, Paul SM, Crawley JN: A pretest procedure reliably predicts performance in two animal models of inescapable stress. *Pharmacol Biochem Behav* 33:649-654, 1989.
- Drugan RC, Morrow AL, Weizman R, Weizman A, Deutsch SI, Crawley JN, Paul SM: Stress-induced behavioral depression in the rat is associated with a decrease in GABAmediated chloride ion flux and brain benzodiazepine receptor occupancy. *Brain Res* 487:45-51, 1989.
- 92. Fisone G, Berthold M, Bedecs K, Unden A, Bartfai T, Bertorelli R, Consolo S, Crawley JN, Martin B, Nilsson S, Hökfelt T: N-terminal galanin-(1-16) fragment is an agonist at the hippocampal galanin receptor. *Proc Natl Acad Sci USA* 86:9588-9591, 1989.
- 93. Glowa JR, Crawley J, Suzdak PD, Paul SM: Ethanol and the GABA receptor agonist Ro 15-4513. *Pharmacol Biochem Behav* 31:767-772, 1989.
- 94. Mefford IN, Lawrenz AL, Hsiao JK, Crawley JN: Activation in young rats induced by LY134046, an inhibitory of phenylethanolamine N-methyltransferase. *Psychopharmacology* 98:240-244, 1989.
- 95. Zohar J, Murphy DL, Crawley JN: Hyperlocomotion induced by dopamine or cholecystokinin+dopamine in the nucleus accumbens is not modified by chronic lithium treatment. *Prog Neuropsychopharmacol Biol Psychiat* 13:775-779, 1989.
- 96. Austin MC, Cottingham SL, Paul SM, Crawley JN: Tyrosine hydroxylase and galanin mRNA levels in locus coeruleus neurons are increased following reserpine administration. *Synapse* 6:351-357, 1990.
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- 77. Crawley JN, Mouse behavioral assays relevant to the symptoms of autism. *Brain Pathology* 17:448-459, 2007.
- 78. Crawley JN, Testing hypotheses about autism. Science 318:56-57, 2007.
- 79. Crawley JN, Social behavior tests for mice. In *What's Wrong With My Mouse? Strategies for Rodent Behavioral Phenotyping*, Short Course Syllabus, Society for Neuroscience, Washington, DC, 2007.
- 80. Crawley JN, Behavioral phenotyping strategies for mutant mice. Neuron, in press

INVITED LECTURES, 1996-present

- 1. University of Kentucky Department of Anatomy and Neurobiology, "Galanin-acetylcholine interactions in rodent memory paradigms relevant to Alzheimer's disease." February 6, 1996.
- 2. Keystone Symposium on Neural Peptides, "Inhibitory actions of galanin on rodent memory tasks relevant to Alzheimer's disease," February 12, 1996.
- 3. NIH Integrative Neuroscience Seminar Series, "Galanin inhibits performance on memory tasks in rodent models of Alzheimer's disease," March 28, 1996.
- 4. Schering-Plough Research Institute, "Behavioral actions of galanin and galanin antagonists in rodent feeding and memory paradigms," April 18, 1996.
- 5. NIH Workshop on Behavioral Phenotypes of Inbred Strains of Mice, "Anxiety-related behaviors and diazepam response in inbred mouse strains," Workshop organized by R Paylor and JN Crawley, April 24, 1996.
- Georgetown University Department of Pharmacology Seminar Series, "Inhibitory Actions of Galanin on Cholinergic Functions in Rodent Memory Tasks: Relevance to Alzheimer's disease," May 7, 1996.
- 7. R.W. Johnson Pharmaceutical Research Institute, "Galanin-acetylcholine interactions in memory and Alzheimer's disease," May 16, 1996.
- 8. Canadian College of Neuropsychopharmacology Plenary Lecture, "Galanin-acetylcholine interactions in rodent memory tasks and Alzheimer's disease," June 4, 1996.
- 9. Merck Research Laboratories, "Galanin receptor antagonists in rodent feeding and memory paradigms," July 23, 1996.
- 10. Astra Arcus AB Stockholm, "Feeding, learning and memory profiles of galanin," September 9, 1996.

- 11. Pennsylvania State University Neuroscience Seminar Series, "Inhibitory actions of galanin in rodent memory paradigms," October 18, 1996.
- 12. National Institute of Mental Health Satellite Symposium, Society for Neuroscience Annual Meeting, "Opportunities for behavioral neuroscientists to investigate the behavioral phenotypes of transgenic and knockout mice," November 15, 1996.
- 13. Society for Behavioral Neuroendocrinology Annual Meeting, "Transgenic/knockout approaches to investigate genes mediating normal and abnormal social behaviors," May 28, 1997.
- 14. National Institute on Drug Abuse Satellite Symposium, Society for Neuroscience Annual Meeting, "Behavioral phenotyping of mutant mice," October 29, 1997.
- 15. Merck Frosst Research, Dorval, Canada, "Behavioral actions of galanin," March 13, 1998.
- Wenner-Gren Foundations International Symposium, Stockholm, Sweden, Galanin: Basic Research Discoveries and Therapeutic Implications, "Galanin inhibits performance on rodent memory tasks," May 5, 1998.
- 17. First Joint Meeting of the European Neuropeptide Club and the Summer Neuropeptide Conference, Gent, Belgium, "Strategies for assessing learning and memory in transgenic and knockout mice," May 6, 1998.
- 18. NIH Genetics Interest Group meeting, "Strategies for behavioral phenotyping of transgenic and knockout mice," June 9, 1998.
- 19. Neurogen Corporation, Branford, CT, "Actions of central galanin on feeding and memory," August 4, 1998.
- 20. Merck Neuroscience Research Center Symposium, The Role of Transgenic Mouse Models in Furthering Our Understanding of the Processes Underlying Learning and Memory, Terlings Park, England, UK, "Inbred strains of mice: Caveats on the role of background genes in evaluating the behavioral phenotype of transgenic and knockout mice on learning and memory tasks," October 16th, 1998.
- 21. Brain Research Interactive Conference, Satellite to the Society for Neuroscience Annual Meeting, Knockouts and Mutants: Genetically Dissecting Brain and Behavior, San Diego, CA, "Experimental design and evaluation of general health, sensory functions, motor abilities, and specific behavioral paradigms in transgenic and knockout mice," November 5th, 1998.
- 22. Bourne Laboratory, Department of Psychiatry, Cornell Medical Center, White Plains, NY, "Strategies for behavioral phenotypes of transgenic and knockout mice," November 24, 1998.
- 23. Oak Ridge National Laboratory, Oak Ridge, TN, "Strategies for behavioral phenotyping of mutant mice," December 11, 1998.
- 24. Neuroscience Seminar Series, Uniformed Services University of the Health Sciences, Bethesda, MD, "Behavioral phenotyping of transgenic and knockout mice with mutations in genes relevant to learning and memory," January 6th, 1999.

- 25. Behavioral and Social Sciences Interest Group Seminar, Bethesda, MD, "The misbehaving gene," January 14th, 1999.
- 26. Neuroscience Faculty Seminar Series, Texas A&M University, College Station, TX, "Behavioral phenotyping of transgenic and knockout mice," February 3rd, 1999.
- 27. Neuroscience Program Seminar Series, University of Michigan, Ann Arbor, MI, "Behavioral phenotyping of transgenic and knockout mice with mutations in genes relevant to learning and memory," February 15th, 1999.
- 28. National Cancer Institute Symposium, Pathology of Genetically-Engineered Mice, "Strategies for behavioral phenotyping of transgenic and knockout mice," Bethesda, MD, February 25th, 1999.
- 29. Hoffmann-La Roche, Basel, Switzerland, "Rodent learning and memory tasks relevant to aging and Alzheimer's disease," March 2, 1999.
- Tenth Annual Spring Brain Conference, Sedona, AZ, "Inhibitory actions of galanin on rodent memory tasks relevant to Alzheimer's disease," March 11th, 1999.
- 31. Purdue University Special Lectures in Neuroscience Series, West Lafayette, IN, "Inhibitory actions of galanin in rodent memory tasks: relevance to Alzheimer's disease;" and Neuroscience Graduate Program Lecture Series, "Behavioral phenotyping of transgenic and knockout mice," April 28th and 29th, 1999.
- 32. NIH Alzheimer's Interest Group, Bethesda, MD, "Inhibitory actions of galanin in rodent memory tasks relevant to Alzheimer's disease," Bethesda, MD, May 6th, 1999.
- 33. University of Washington Physiology Seminar, Seattle, WA, "Strategies for behavioral phenotyping of transgenic and knockout mice," June 2, 1999.
- 34. Lilly Neuroscience Seminar, Indianapolis, IN, "Strategies for behavioral phenotyping of transgenic and knockout mice," November 10th, 1999.
- 35. US/Japan Meeting, National Academy of Sciences, Washington, DC, "Defining phenotype in genetically engineered mice," November 15th, 1999.
- 36. International Behavioural and Neural Genetics Society Annual Meeting, Brighton, UK, "What's wrong with my mouse? Behavioral phenotyping strategies and applications." June 22, 2000.
- 37. Summer Neuropeptide Conference, Ste. Adele, Quebec, Canada, "Learning and memory deficits in galanin-overexpressing transgenic mice," July 23rd, 2000.
- Nobel Forum Minisymposium, In Search of Molecular Substrates of Behavior, Stockholm Sweden, "Strategies for behavioral phenotyping of transgenic and knockout mice," October 5, 2000.
- 39. Scripps Research Institute, Neuroscience Seminar Series, La Jolla, CA, "Behavioral phenotype of galanin transgenic mice," February 28, 2001.

- 40. University of North Carolina, Neurodevelopment Disorders Research Center seminar, Chapel, Hill, NC, "Strategies for behavioral phenotyping of mouse models," April 4th, 2001.
- 41. International Behavioral Neuroscience Society Annual Meeting, Presidential Lecture, Cancun, Mexico, "Galanin: An inhibitory neuropeptide overexpressed in Alzheimer's disease impairs learning and memory in rats and transgenic mice," April 27, 2001.
- 42. Karolinska Institutet, The Mouse in Cognitive Neuroscience: Implications for Functional Genomics, Postgradaute Course in Behavioural Neuroscience, Stockholm, Sweden, "Overall strategy for mouse behavioral phenotyping," May 9, 2001; "Assessment of anxiety tasks in mice. What do they predict?" May 10th, 2001.
- University of Helsinki Symposium on Phenotypic Analysis of Transgenic Mice, Helsinki, Finland, "Inhibitory actions of galanin in memory tasks relevant to Alzheimer's disease," May 12th, 2001.
- 44. Bio 2001, Symposium on Methods for Phenotypic Evaluation of Transgenic and Knockout Mice, San Diego, CA, "Methods for evaluating the behavioral phenotype of transgenic and knockout mice," June 27th, 2001
- 45. EMBO/FENS Practical Course on Mouse Transgenics and Behaviour, University of Zurich, Zurich, Switzerland, "What's wrong with my mouse? Behavioural phenotyping strategies and applications," July 18th, 2001.
- 46. Swiss Federal Institute of Technology Seminar, Zurich, Switzerland, "Selective memory deficits in galanin-overexpressing transgenic mice," July 19th, 2001.
- 47. The Jackson Laboratory 42nd Annual Short Course in Medical and Experimental Mammalian Genetics, Bar Harbor, ME, "Mouse behavioral genetics," July 24th, 2001.
- 48. George Washington University Neuroscience Seminar Series, Washington DC, "Memory deficits in galanin overexpressing transgenic mice: relevance to Alzheimer's disease," September 10th, 2001.
- 49. University of Pennsylvania Neuroscience, David Mahoney Institute of Neurological Sciences Seminar Series, Philadelphia, PA, "Memory deficits in a galanin overexpressiong transgenic mouse model of Alzheimer's disease," October 3rd, 2001
- 50. Joslin Diabetes Center, Harvard University, Boston, MA, "Strategies for behavioral phenotyping of transgenic and knockout mice," November 1st, 2001.
- 51. Tenth Annual Puerto Rico Neuroscience Conference, San Juan, PR, "Strategies for behavioral phenotyping of transgenic and knockout mice," November 30th, 2001.
- 52. Howard University Department of Pharmacology Seminar Series, Washington, DC, "Memory deficits in galanin overexpressing transgenic mice: Relevance to Alzheimer's disease," January 9th, 2002.

- 53. University of North Carolina Department of Psychology Seminar Series, "Memory impairments in galanin overexpressing transgenic mice: Relevance to Alzheimer's disease. January 16th, 2002.
- 54. National Academy of Sciences Institute for Laboratory Animal Research, Workshop on Guidelines for the Use of Animals in Neuroscience and Behavioral Research, Washington, DC, "Transgenic animals," February 27th, 2002.
- 55. Synaptic Pharmaceuticals Seminar Series, Paramus, NJ, "New development in the study of galanin knockout animals," March 13, 2002.
- 56. American College of Laboratory Animal Medicine 2002 Forum, Genetics, Genomics, and Gene Therapy, Savannah, GA, "Behavioral phenotyping in rodents," April 15th, 2002.
- 57. Gladstone Institute of Neurological Disease, San Francisco, CA, "Strategies for behavioral phenotyping of transgenic and knockout mice," April 25th, 2002.
- 58. National Institute of Mental Health Intramural Research Program Senior Investigators Seminar Series, NIMH/IRP Fellows Committee, Bethesda, MD, "Memory deficits in galanin overexpressing transgenic mice: Relevance to Alzheimer's disease," May 15, 2002.
- 59. National Institutes of Health Conference, Planning the Design of an Animal Research Facility at the NIH, Bethesda, MD, "Introduction to rodent behavioral studies," June 18th, 2002.
- 60. The Jackson Laboratory Short Course on Pathobiology of the Modern Laboratory Mouse, Bar Harbor, ME, "Behavioral phenotyping of mutant mice," June 26th, 2002.
- 61. Cold Spring Harbor Laboratory Mouse Behavioral Analysis Course, Cold Spring Harbor, NY, "Strategies for behavioral phenotyping," June 29th, 2002.
- 62. Eighth International Summer School on Behavioral Neurogenetics, Worcester, MA, "Behavioral phenotyping of transgenic and knockout mice," August 8th, 2002.
- 63. University of Massachusetts Neuroscience Seminar, Worcester, MA, "Inhibitory actions of galanin in memory tasks relevant to Alzheimer's disease," September 12, 2002.
- 64. National Institute on Drug Abuse Lecture Series, Rockville, MD, "Galanin induces performance deficits on learning and memory in rodents," October 2, 2002.
- 65. National Institute on Alcoholism and Alcohol Addiction Seminar, Rockville, MD, "Strategies for behavioral phenotyping of transgenic and knockout mice," October 24, 2002.
- 66. Sixteenth Annual Neuroscience Symposium of the Central Virginia Chapter of the Society for Neuroscience, Richmond, VA, "Learning and memory deficits in galanin overexpressing transgenic mice: Relevance to Alzheimer's disease," April 7, 2003.
- 67. First Annual Meeting of the STAART Autism Research Center, Chapel Hill, NC, "Project IV: Gene dissection of autism-related behaviors in mice," April 9, 2003.

- 68. Laboratory of Animal Medicine Residency Program Course, Uniformed Services University of the Health Sciences, Bethesda, MD, "Behavioral Phenotyping of Transgenic Rodents," April 1, 2003.
- 69. Integrative Genomics Symposium, University of Michigan, Ann Arbor, MI, "Strategies for Behavioral Phenotyping of Transgenic and Knockout Mice," May 7, 2003.
- Neuroscience Seminar Series, McLean Hospital, Harvard Medical School, Belmont, MA, "Cognitive deficits in galanin overexpressing transgenic mice: Relevance to Alzheimer's disease," May 20th, 2003.
- Monitoring Molecules in Neuroscience: Tenth International Conference on *In Vivo* Methods, Stockholm, Sweden, "Transgenic models of CNS diseases: role of behavioral pharmacology," June 25th, 2003.
- 72. Gladstone Distinguished Scholar Lecture, San Francisco, CA, "Cognitive deficits in galanin overexpressing transgenic mice: Relevance to Alheimer's disease," September 25, 2003.
- 73. Society for Neuroscience Short Course 2, San Diego, CA, "Mouse Behavioral Phenotyping," Organizer and Introductory Lecturer, November 7th, 2003.
- 74. Autism Forum, University of North Carolina, Chapel Hill, NC, "How would you model autism in mice?" February 3rd, 2004.
- 75. Neurobiology Seminar, University of North Carolina, Chapel Hill, NC, "Behavioral phenotyping of transgenic and knockout mice," February 6th, 2004.
- 76. Neuroscience Program Seminar Series, Georgetown University School of Medicine, "How would you model autism in mice?" February 24th, 2004.
- 77. Conte Center Seminar Series, University of North Carolina, Chapel Hill, NC, "Mouse models of schizophrenia," March 2, 2004.
- 78. Gatlinburg Conference on Research and Theory in Intellectual and Developmental Disabilities, San Diego, CA, Plenary Lecturer, "Animal models." March 12, 2004.
- 79. New Paradigms for Exploring Gene-Environment-Behavior Relationships, National Institute on Environmental and Health Sciences, Research Triangle Park, NC, "How would you model autism in mice?" April 28, 2004.
- STAART/CPEA Conference on Autism, Washington, DC, "How would you model autism in mice?" May 18, 2004.
- 81. NIMH MATRICS Meeting, Potomac, MD, Discussion session on mouse models of social cognition deficits in schizophrenia, September 9, 2004.
- 82. EUMORPHIA Annual Meeting, Understanding Human Disease Through Mouse Genetics, London, UK, "High quality and high throughput behavioral phenotyping," October 5, 2004.

- 83. Galanin 2004, San Diego, CA, Co-Organizer and Roundtable Discussion leader, "Galanin research tools ligands and mutants," October 22, 2004.
- 84. National Alliance on Autism Research meeting, Integrating the Clinical and Basic Sciences of Autism, Fort Lauderdale, FL, "Designing mouse behavioral tasks to model the symptoms of autism," November 12, 2004.
- 85. Food and Drug Administration Seminar Series, Rockville, MD, "Behavioral analysis of mouse models of human diseases," December 15, 2004.
- 86. University of Florida School of Medicine Grand Rounds, Gainesville, FL, "Autism models,"January 28, 2005.
- 87. Case Western Reserve University Neuroscience Seminar Series, Cleveland, OH, "Behavioral phenotyping strategies", February 17, 2005.
- 88. Uniformed Services Veterinary Course, Betheda, MD, "Strategies for mouse behavioral phenotyping," April 13, 2005.
- NIH Animal Welfare Interest Group, Bethesda, MD, "Strategies for behavioral phenotyping," April 27, 2005.
- 90. Experimental Neurogenetics of the Mouse, Second Annual Course, Memphis, TN, two lectures: "Examining general behavior in mice," "Social behavior," May 19, 2005.
- 91. University of Pennsylvania Neuroscience Seminar Series, Philadelphia, PA, "Mouse behavioral phenotyping: Designing tasks to model the symptoms of autism," May 24, 2005.
- 92. International Behavioral Neuroscience Society Annual Meeting, Sante Fe, NM, Marjorie A. Myers Lifetime Achievement Award and symposium lecture, "Behavioral tasks to model the core symptoms of autism in mice," June 2, 2005.
- 93. Summer Neuropeptide Conference, Miami, FL, Fleur Strand Award Lecture, "Neuropeptides and Behavior: The trouble with galanin in Alzheimer's Disease," July 8, 2005.
- 94. National Institute of Mental Health Scientific Review Administrators Lecture Series, Bethesda, MD, "Modeling the symptoms of autism in mice," September 7, 2005.
- 95. Genomic Neuroscience Conference, Wellcome/Cold Spring Harbor, Hinxton, Cambridge, UK, "Mouse behavioral phenotyping," September 29th, 2005.
- University of Illinois Neuroscience seminar series, Urbana, IL, "Galanin overexpressing transgenic mice display learning and memory deficits: Relevance to Alzheimer's disease," October 7th, 2005.
- 97. Waisman Center seminar series, University of Wisconsin, Madison, WI, "Modeling the symptoms of autism in mice," October 4th, 2005.
- 98. Neurobiology of Disease Workshop on Autism, Society for Neuroscience annual meeting, Washington, DC, "Strategies to model the symptoms of autism in mice," November 11, 2005.

- 99. Wadsworth Institute seminar series, "Strategies for modeling the symptoms of autism in mice," December 8th, 2005.
- 100.Neuroscience seminar series, Medical College of South Carolina, Charleston, SC, "Galanin impairs performance on learning and memory tasks: Relevance to Alzheimer's disease," January 26th, 2006.
- 101.Brain Institute seminar, University of Utah, Salt Lake City, UT, "Strategies for mouse behavioral phenotyping," February 6th, 2006.
- 102.Rockefeller University seminar, New York, NY, "Strategies for mouse behavioral phenotyping," March 15th, 2006.
- 103.Pharmacology graduate seminar, Howard University, Washington, DC, "Modeling the symptoms of autism in mice," March 29th, 2006.
- 104.International Meeting for Autism Research, Montreal, Canada, "Strategies for designing mouse behavioral tasks relevant to the symptoms of autism," June 3, 2006.
- 105.Seaver Center seminar, Mt. Sinai School of Medicine, NY, NY, "Designing mouse behavioral tasks relevant to the symptoms of autism," September 13, 2006.
- 106.GTCBio conference Epigenetics and Neural Developmental Disorders, Beltsville, MD, "Designing mouse behavioral tasks relevant to the symptoms of autism," September 19, 2006.
- 107.National Institute on Dental and Craniofacial Research seminar series, Bethesda, MD, "Behavioral phenotyping of transgenic and knockout mice," January 26, 2007.
- 108. The Neurosciences Institute, Meeting on Schizophrenia, San Diego, CA, "Rodent models of schizophrenia," February 5th, 2007.
- 109.Staff Training in Extramural Programs Forum on Animal Models, NIH, Bethesda, MD, "Strategies for modeling the symptoms of autism in mice," February 8th, 2007.
- 110.Neurodevelopmental Disorders Interest Group, NIMH, Bethesda, MD, "How would you model the symptoms of autism in mice," February 8th, 2007.
- 111.Neuroscience Seminar Series, University of Virginia, Charlottesville, VA, "Approaches to modeling the symptoms of autism in mice," February 13th, 2007.
- 112.Behavioral Neuroscience Seminar Series, Ohio State University, Columbus, OH, "Strategies for modeling the symptoms of autism in mice," March 1, 2007.
- 113.Research Seminar Series, Maryland Psychiatry Research Center, University of Maryland, Baltimore, MD, "Strategies for modeling the symptoms of autism in mice," March 7th, 2007.

- 114.Neurodevelopmental Disorders Research Center Fellows Seminar Series, University of North Carolina School of Medicine, Chapel Hill, NC, "Mouse behavioral phenotyping," March 21st, 2007.
- 115.Neuroscience Seminar Series, Vanderbilt University School of Medicine, Nashville, TN, "Strategies for modeling the behavioral symptoms of autism in mice," April 5th, 2007.
- 116.Emerging Methods and Technologies in Behavioral Neuroscience Workshop, Society for Behavioral Neuroendocrinology, Asilomar, CA, "Strategies for designing rodent models of neuropsychiatric disorders," June 21st, 2007.
- 117. Translational Approaches to Studying Repetitive Behavior and Resistance to Change in Autism, NIMH Workshop, Bethesda, MD, "Repetitive self-grooming in socially deficient BTBR T+tf/J mice," September 6th, 2007.
- 118. Autism and Developmental Disorders Colloquium, Massachusetts Institute of Technology, Cambridge, MA, "Designing behavioral tasks for mouse models of autism," September 19th, 2007.
- 119. Neuroscience Seminar Series, University of Virginia, Charlottesville, VA, "Designing mouse behavioral tasks relevant to the symptoms of autism," September 25th, 2007.
- 120. Neurogenetics Seminar Series, University of California San Francisco, "Strategies for modeling the behavioral symptoms of autism in mice," October 2nd, 2007.
- 121.Short Course #1 Mouse Behavioral Phenotyping, Society for Neuroscience, San Diego, CA, Organizer and Lecturer, "Assays for mouse social behaviors," November 2, 2007.
- 122. Neuroscience and Medicine Seminar Series, Pasteur Institute, Paris, France, "Developing mouse models of autism," November 15th, 2007.
- 123. Department of Pharmacology Seminar Series, University of Texas Health Science Center, San Antonio, TX, "Strategies for modeling the symptoms of autism in mice," November 28, 2007.
- 124. Development of Novel Neuropharmacological Therapeutics for Autism, Conference organized by Autism Speaks, Boca Raton, FL, "Assays with face validity for the behavioral symptoms of autism in mice," December 7th, 2007.

LABORATORY PERSONNEL

CURRENT:

- 1. CHADMAN, Kathleen, Postdoctoral Fellow, Intramural Research Training Award, 2007 present
- 2. YANG, Mu, Postdoctoral Fellow, Intramural Research Training Award, 2007 present
- 3. SCATTONI, Maria Luisa, Postdoctoral Fellow, Special Volunteer, 2006 present
- 4. SILVERMAN, Jill, Laboratory Manager, 2007 present
- 5. SULLIVAN, Timothy, Technician, 2002 present

PAST POSTDOCTORAL FELLOWS:

- 1. DRUGAN, Robert C., 1984-87. Current affiliation: Department of Psychology, University of New Hampshire, Durham, NH
- 2. KALTWASSER, Maria T., 1985-86. Current affiliation: Berlin-Chemie, Berlin, Germany
- 3. MASTROPAOLO, John, 1986-88. Current affiliation: Department of Psychiatry, Veterans Administration Hospital and Georgetown University, Washington, DC
- 4. COTTINGHAM, Sandra L., 1987-89. Current affiliation: Department of Pathology, Spectrum-Health, Grand Rapids, MI
- 5. AUSTIN, Mark C., 1988-91. Current affiliation: Department of Psychiatry, University of Pittsburgh, Pittsburgh, PA
- 6. de BARTOLOMEIS, Andrea, 1990-92. Current affiliation: Department of Psychiatry, University of Naples, Italy.
- 7. CORWIN, Rebecca L., 1991-94. Current affiliation: Department of Nutrituion, Pennsylvania State University, University Park, PA.
- 8. ROBINSON, John K., 1991-94. Current affiliation: Department of Psychology, State University of New York, Stony Brook, NY.
- 9. MATHIS, Chantal, 1992-93. Current affiliation: CNRS, Universite Louis Pasteur, Strasbourg, France.
- 10. HOLMES, Philip V., 1992-95. Current affiliation: Department of Psychology, University of Georgia, Athens, GA.
- 11. SILLS, Terrence L., 1994-96. Current affiliation: Clarke Institute of Psychiatry, Toronto, Canada.

* Received NIH Fellows Award for Research Excellence, 1995

12. TABER, Matthew, 1996-97. Current affiliation: Bristol-Myers Squibb Inc., Wallingford, CT.

- 13. PAYLOR, Richard, 1995-98. Current affiliation: Department of Molecular and Human Genetics, Baylor College of Medicine, Houston TX.
- 14. GLEASON, Theresa, 1997-1998. Current affiliation: Neuroscience Program, Veterans Administration, Washington, DC.
- 15. McDONALD, Michael, 1994-99. Current affiliation: Department of Pharmacology, Vanderbilt University, Nashville, TN.

* Received NIH Fellows Award for Research Excellence, 1997

- 16. MIYAKAWA, Tsuyoshi, Visiting Postdoctoral Fellow, 1998-1999. Current affiliation: Tenure track faculty member, Department of Psychology, Kyoto University, Japan
- 17. KINNEY, Jefferson W., Postdoctoral Fellow, Intramural Research Training Award, 2000-2002. Current affiliation: Department of Neuropharmacology, Scripps Research Institute, La Jolla, CA.
- HOLMES, Andrew, Postdoctoral Fellow, Intramural Research Training Award, 1998-2003. Current affiliation: Tenure-track faculty member, Intramural Research Program, National Institute on Alcoholism and Alcohol Abuse, Rockville, MD.
 * Received NIH Fellows Award for Research Excellence, 2000

ACNP/Bristol-Myers Squibb Travel Award Winner, 2001

- WRENN, Craige C., Postdoctoral Fellow, Intramural Research Training Award, 1999
 2004. Current affiliation: Tenure-track faculty member, School of Pharmacy, Drake University, Des Moines, IA.
- 20. RUSTAY, Nathan R., Postdoctoral Fellow, Intramural Research Training Award, 2004-2006. Current affiliation: Investigator, Cognition Program, Abbott Laboratories, Abbott Park, IL.
- 21. BAILEY, Kathleen R., Postdoctoral Fellow, Intramural Research Training Award, 2004-2007. Current affiliation: Assistant Professor, Department of Psychology, Susequehanna University, Susquehanna, PA.
- 22. Staff Scientist HILL-DEVINE, Joanna, 2003-2007

PAST PREDOCTORAL (GRADUATE AND POSTBACCALAUREATE) FELLOWS:

LIBBEY, Megan, 1996-97. Current affiliation: Department of Psychology, Graduate School, Boston University, Boston, MA

DREILING, Jennifer, Postbaccalaureate, 2003-2004. Current affiliation: University of Virginia School of Medicine, Charlottesville, VA

CUASAY, Katrina, 2004-2005.

LIM, Maria, Postbaccalaureate, 2005-2006. Future affiliation: Graduate student in Neuroscience, University of Pennsylvania School of Medicine, Philadelphia, PA

KARLSSON, Rose-Marie, Graduate Student, NIH/Karolinska Institutet Graduate Program, 2003-2005

STACK, Conor, Postbaccalaureate IRTA, 2006-2007

PAST VISITING SCIENTISTS:

- 1. ESTALL, Lorna, 1985. Department of Psychology, University of Durham, England, UK.
- 2. DE WITTE, Philippe, 1988. Department of Psychobiologie, Universite Catholique Louvain, Belgium.
- 3. LAITINEN, Kirsti, 1988-90. Department of Pharmacology, University of Kuopio, Finland.
- 4. DE MESQUITA, Susan, 1988-89. Department of Physiology, Marshall University School of Medicine, Huntington, WV.
- 5. GENC, Ece, 1989. University of Istanbul, Turkey.
- 6. IISMAA, Tina, 2001. Garvan Medical Research Institute, Sydney, Australia
- 7. HEILIG, Markus, 2001. Karolinska Institute, Huddinge, Sweden
- 8. MCFARLANE, Hewlet, 2006. Kenyon College, Gambier, OH

STUDENT VOLUNTEERS:

- 1. WHITE, Marsha, 1985, St. Mary's College of Maryland
- 2. SMITH, Courtney, 1985, Bethesda-Chevy Chase High School
- 3. KALINA, Ken, 1986, Gustavus Adolphus College, St. Peter, MN
- 4. KHOSLA, Sareena, 1986-87, Madeira School, McLean, VA
- 5. RHOW, Ekwan, 1986, Walt Whitman High School, Bethesda, MD
- 6. UPADYA, Yogita, 1987-88, Madeira School, McLean, VA
- 7. POTTER, Marie, 1988-90, Trinity University, TX
- 8. CHI, Angela, 1988, Churchill High School Potomac, MD
- 9. TURNER, Anne-Marie, 1988-89, Madeira School, McLean, VA
- 10. REINSCH, Marianna, 1989, West Virginia Wesleyan College, Buckhannon, WV
- 11. WEST, Howard, 1989, Princeton University, Princeton, NJ
- 12. TURNER, Eric, 1989, Oregon Health Sciences University School of Medicine
- 13. MINKUNAS, Darin, 1990, Ohio State University, Columbus, OH
- 14. BHATIA, Neeti, 1989-90, Winston Churchill High School, Bethesda, MD
- 15. BROWN, Nathan, 1990, Montgomery Blair High School, Silver Spring, MD
- 16. HALBERSTADT, Jamin, 1990, Swarthmore College, Swarthmore, PA
- 17. EVERS, John R., 1989-90, Case Western Reserve University, Cleveland, OH
- 18. COUNTS, Helen, 1989-90, Madeira School, McLean, VA
- 19. CHOU, Jeanne, 1990-91, Madeira School
- 20. FARMER, Charles, 1991, Kenyon College
- 21. LAWRENCE, Brenda, 1991, Smith College, Northampton, MA
- 22. HODZIEWICH, Gabriel, 1991-92, St. Andrew's High School (Teacher), Bethesda, MD
- 23. LAWANDE, Reena, 1991-92, Madeira School, McLean, VA
- 24. JORN, Andreas, 1992, Gustavus Aldophus College, St. Peter, MN
- 25. KOPRIVICA, Vuk, 1992-93 Bethesda-Chevy Chase High School, Bethesda, MD
- 26. BUCKHOLTZ, Joshua, 1992, Churchill High School, Potomac, MD
- 27. HIGGINS, Karen, 1992, Colgate University

- 28. LAM, Natalie, 1992-93, Madeira School, McLean, VA
- 29. SHADER, David, 1992-93, St. Andrew's High School, Bethesda, MD
- 30. ROWE, Paula, 1993-94, Spring Valley High School (Teacher), Silver Spring, MD
- 31. HARDY, Melva, 1993-94, Walter Johnson High School, Bethesda, MD
- 32. KOPRIVICA, Uros, 1993-94, Bethesda-Chevy Chase High School, Bethesda, MD
- 33. O'MARA, John, 1993, Colgate University
- 34. WEDDLE, Meagan, 1993-94, Madeira School, McLean, VA
- 35. MOORSHEAD, Ashley, 1994-95, Madeira School, McLean, VA
- 36. CARRILO, Jose Miguel, 1994-95, Albert Einstein High School, Silver Spring, MD
- 37. McCOMAS, Elena, 1995, Magruder High School (Teacher), Rockville, MD
- 38. BIZRI, Carolyn, 1995, Boston College
- 39. DRUMMOND, Melody, 1995, Governors School for Science and Math, Hartsville, SC
- 40. ONALAJA, Ava, 1995-96, Montgomery Blair High School, Silver Spring, MD
- 41. KALRA, Simrun, 1995-96, Madeira School, McLean, VA
- 42. SCHLAIFER, Jonathan, 1996, Montgomery Blair High School, Silver Spring, MD
- 43. HERSCOVITCH, Penny, 1996, Sidwell Friends High School, Washington, DC
- 44. MILLER, Katherine, 1996-97, Walter Johnson High School, Bethesda, MD
- 45. LIGLER, Amy, 1997, Wake Forest University, Winston-Salem, NC
- 46. BRYANT, Katherine, 1997, Atholton High School, Columbia, MD
- 47. NGUYEN, Michelle, 1997-98, Albert Einstein High School, Silver Spring, MD
- 48. ARAUJO, Kristlyn, 1997-98, Seneca Valley High School, Germantown, MD
- 49. DREILING, Jennifer, 1997-98, Madeira School, McLean, VA, 1999, 2000, 2001 Wellsley College, Middletown, MA
- 50. ARIEFF, Alexis, 1998, Ecole Active Bilingue Jeannine Manuel, Paris, France
- 51. LUO, Mulon, 1998-99, Walt Whitman High School, Bethesda, MD
- 52. GUTSHALL, Mitchell, 1998-99, Walter Johnson High School, Bethesda, MD
- 53. DE SOLE, Laura, 1999-2000, Madeira School, McLean, VA
- 54. YARED, Edom, 1999-2000, Kennedy High School, Silver Spring, MD
- 55. THAYER, Karen, 2000, Walt Whitman High School, Bethesda, MD
- 56. YANG, Rebecca, 2000-2001, Spring Brook High School, Silver Spring, MD
- 57. STAROSTA, Grzegorz, 2000-2001, Rockville High School, Rockville, MD
- 58. TIGNOR, April, 2000, Cornell University Medical School, New York, NY
- 59. LONG, Kassy, 2000-2001, Madeira School, McLean, VA
- 60. HARRIS, Ashley, 2000-2001, Walt Whitman High School, Bethesda, MD
- 61. SAAVEDRA, Maria, 2001-2002, Walter Johnson High School, Bethesda, MD
- 62. INNERFIELD, Caitlin, 2001-2002, Sherwood High School, Brookeville, MD
- 63. VISHWANATH, Janani, 2001-2002, Walt Whitman High School, Bethesda, MD
- 64. CURLEY, Allison, 2002, Colgate University, Hamilton, NY
- 65. SCHLOSSER. Sophie, 2002-2003, Walter Johnson High School, Bethesda, MD
- 66. GOLD, Eric, 2002-2003, Quince Orchard High School, Gaithersburg, MD
- 67. KLAUS, Michael, 2003, Landon School, Bethesda, MD
- 68. STEPHENSON, Dejaimenay, 2003-2004, John F. Kennedy High School, Silver Spring, MD
- 69. KOENIG, Elizabeth, 2003-2004, Paint Branch High School, Burtonsville, MD
- 70. FLORES, Sandra, 2004, University of Maryland, College Park, MD
- 71. COHEN, Jordan, 2004-2005, Winston Churchill High School, Potomac, MD
- 72. TOLU, Selen, 2004-2005, James Hubert Blake High School, Silver Spring, MD
- 73. MORRIS, Tabitha, 2005-2006, Bethesda-Chevy Chase High School, Bethesda, MD
- 74. CHEN, Thomas, 2005-2006, Winston Churchill High School, Potomac, MD

- 75. WASHBURN, Richard, 2005-2006, Walt Whitman High School, Bethesda, MD
- 76. PURI, Amit, Thomas S. Wooten High School, Rockville, MD
- 77. FREEMAN, Anike, 2006-2007, Damascus High School, Damascus, MD
- 78. ZHODZISHSKY, Vladimir, 2006-2007, Thomas S. Wooten High School, Rockville, MD
- 79. BOLTUCK, Sarah, 2007-2008, Walt Whitman High School, Bethesda, MD
- 80. CLARKE, Andres, 2007-2008, Gaithersburg High School, Gaithersburg, MD