

# CURRICULUM VITAE

## Mark Allen Geyer, Ph.D.

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**DATE & PLACE OF BIRTH:** December 19, 1944; Portland, Oregon, U.S.A.

### EDUCATION:

1962 – 1966 B.A. Biology; University of Oregon Honors College

1966 – 1968 M.A. Psychology; University of Iowa

1970 – 1972 Ph.D. Psychology; University of California at San Diego

### PROFESSIONAL TRAINING:

1966 – 1968 Graduate Research Assistant, Department of Psychology, University of Iowa, with Dr. S.S. Fox

1968 – 1969 Research Assistant, Department of Psychiatry, School of Medicine, University of Iowa, with Dr. E.M. Gal

1968 – 1970 Research Assistant, Department of Pharmacology, School of Medicine, University of Iowa, with Dr. L.S. Van Orden III

1970 – 1972 Graduate Research Assistant, Department of Psychiatry, School of Medicine, University of California San Diego, with Drs. D.S. Segal and A.J. Mandell

1991, 93, 94 NIH Fogarty Fellow and Visiting Scientist, Department of Experimental Psychology, University of Cambridge, with Dr. T.W. Robbins

### PROFESSIONAL APPOINTMENTS:

1973 – 1978 Assistant Research Psychobiologist, Department of Psychiatry, School of Medicine, University of California San Diego

1979 – 1983 Assistant Professor of Psychiatry, School of Medicine, University of California San Diego

1981 – Pres Member, Graduate Program in the Neurosciences. University of California San Diego

1983 – 1989 Associate Professor of Psychiatry, School of Medicine, University of California San Diego

- 1983 – 1994 Research Scientist Development Awardee, Type II, National Institute of Mental Health
- 1984 – 1988 Member, National Institute of Mental Health, Cellular Neurobiology and Psychopharmacology Research Study Section
- 1989 – 2011 Professor of Psychiatry, School of Medicine, University of California San Diego
- 1990 – Pres Member, Graduate Group in Clinical Psychology, University of California San Diego & San Diego State University
- 1991 – 2006 Field Editor for Preclinical Psychopharmacology, *Psychopharmacology*, Springer-Verlag
- 1994 – 2000 Research Scientist Awardee, National Institute of Mental Health
- 1995 – Pres Adjunct Professor of Neurosciences, School of Medicine, University of California San Diego
- 1997 – Pres Director, Neuropsychopharmacology Unit, VISN-22 Mental Illness Research, Education, and Clinical Center, U.S. Veterans Affairs
- 2000 F. C. Donders Chair (3-month invited visiting Professorship), Psychopharmacology, Faculty of Pharmacy, University of Utrecht, The Netherlands
- 2000 – 2006 Executive Editor, *Neuropharmacology*, Pergamon Press, Elsevier
- 2001 Chair, National Institute of Mental Health, Conte Centers on Schizophrenia Special Emphasis Panel
- 2001 – Pres Elected Member, Scientific Council, Brain and Behavior Research Foundation (NARSAD)
- 2002 – 2005 Co-Chair, Neuropharmacology and New Approaches Committees, NIMH Contract “Measurement and Treatment Research to Improve Cognition in Schizophrenia” (MATRICS)
- 2004 – 2009 Member, Scientific Operations Unit, Compound Selection Committee, and Biomarkers Development Subcommittee; Chair, Preclinical Subcommittee; NIMH Contract “Treatment Units for Research on Neurocognition in Schizophrenia” (TURN)
- 2004 Elected Fellow, American Association for the Advancement of Science (AAAS)
- 2004 – Pres ISI Highly Cited Researcher, Neuroscience
- 2004 – 2008 Associate Editor, *Schizophrenia Bulletin*, Oxford Press
- 2005 – Pres Vice-Chair for Scientific Affairs, Department of Psychiatry, School of Medicine, University of California San Diego
- 2006 – 2011 Executive Committee, NIMH-funded “Cognitive Neuroscience measures of Treatment Response of Impaired Cognition in Schizophrenia” (CNTRICS) Program.
- 2006 – Pres Associate Editor, *Neuropsychopharmacology*, Nature Publishing Group

- 2007 – Pres Associate Chief, Psychophysiology Unit, Center of Excellence for Stress and Mental Health, San Diego Veteran’s Administration Hospital
- 2009 – Pres Member, Scientific Advisory Board, European Union’s Innovative Medicine Initiative “Novel Methods leading to New Medications in Depression and Schizophrenia” (NEWMEDS) program.
- 2010 Awarded Biennial Bleuler Prize for Research in the Schizophrenias, University Hospital of Psychiatry Zurich, Switzerland and the Heffter Research Institute.
- 2010 Elected Fellow, American Psychological Society
- 2011 – pres Distinguished Professor of Psychiatry, School of Medicine, University of California San Diego

## ARTICLES

1. Van Orden, L.S., Burke, J., **Geyer, M.A.**, and Loudon, F.: Localization of depletion sensitive and depletion resistant norepinephrine storage sites in autonomic ganglia. *Journal of Pharmacology and Experimental Therapeutics*, 174:56-71, 1970.
2. **Geyer, M.A.**, Segal, D.S., and Mandell, A.J.: Effect of intraventricular infusion of dopamine and norepinephrine on motor activity. *Physiology and Behavior*, 8:653-658, 1972.
3. **Geyer, M.A.** and Segal, D.S.: Differential effects of reserpine and alpha-methyl-p-tyrosine on norepinephrine and dopamine-induced behavioral activity. *Psychopharmacologia*, 29:131-140, 1973.
4. **Geyer, M.A.** and Mandell, A.J.: Studies of enzymes and modulators in shock-induced fighting. *Psychopharmacology Bulletin*, 9:18-19, 1973.
5. **Geyer, M.A.** and Segal, D.S.: Shock-induced aggression: Opposite effects of intraventricularly infused dopamine and norepinephrine. *Behavioral Biology*, 10:99-104, 1974.
6. Korevaar, W., **Geyer, M.A.**, Knapp, S., Hsu, L. and Mandell, A.J.: Regional distribution of 5-methyltetrahydrofolic acid in brain. *Nature New Biology*, 245:245-246, 1974.
7. Segal, D.S., McAllister, C., and **Geyer, M.A.**: Ventricular infusion of norepinephrine and amphetamine: Direct versus indirect action. *Pharmacology, Biochemistry and Behavior*, 2:79-86, 1974.
8. Knapp, S., Mandell, A.J., and **Geyer, M.A.**: Effects of amphetamines on regional tryptophan hydroxylase activity and synaptosomal conversion of tryptophan to 5-hydroxytryptamine in rat brain. *Journal of Pharmacology and Experimental Therapeutics*, 189:676-689, 1974.
9. **Geyer, M.A.**, Dawsey, W.J., and Mandell, A.J.: Differential effects of caffeine, d-amphetamine, and methylphenidate on individual raphe cell fluorescence: A microspectrofluorimetric demonstration. *Brain Research*, 85:135-139, 1975.

10. **Geyer, M.A.**, Warbritton, J.D., Menkes, D.B., Zook, J.A., and Mandell, A.J.: Opposite effects of intraventricular serotonin and bufotenin on rat startle responses. *Pharmacology, Biochemistry and Behavior*, 3:687-691, 1975.
11. Segal, D.S., **Geyer, M.A.**, and Weiner, B.J.: Strain differences during intraventricular infusion of norepinephrine: Possible role of receptor sensitivity. *Science*, 189:301-303, 1975.
12. **Geyer, M.A.**, Puerto, A., Dawsey, W.J., Knapp, S., Bullard, W.P., and Mandell, A.J.: Histologic and enzymatic studies on the mesolimbic and mesostriatal serotonergic pathways. *Brain Research*, 106:241-256, 1976.
13. **Geyer, M.A.**, Puerto, A., Menkes, D.B., Segal, D.S., and Mandell, A.J.: Behavioral studies following lesions of the mesolimbic and mesostriatal serotonergic pathways. *Brain Research*, 106:256-270, 1976.
14. Hsu, L.L., **Geyer, M.A.**, and Mandell, A.J.: Extrapineal amine N-acetylation in rat brain: Regional and subcellular distribution and enzyme kinetics. *Biochemical Pharmacology*, 25:815-819, 1976.
15. Segal, D.S. and **Geyer, M.A.**: Pre- and post-junctional supersensitivity: Differentiation by intraventricular infusions of norepinephrine and methoxamine. *Psychopharmacology*, 50:145-148, 1976.
16. **Geyer, M.A.**: Functional heterogeneity within neurotransmitter systems. *Psychopharmacology Communications*, 1:675-685, 1976.
17. **Geyer, M.A.**, Petersen, L.R., Rose, G.J., Horwitt, D.D., Light, R.K., Adams, L.M., Zook, J.A., Hawkins, R.L., and Mandell, A.J.: The effects of LSD and mescaline-derived hallucinogens on sensory-integrative function: Tactile startle. *Journal of Pharmacology and Experimental Therapeutics*, 207:837-847, 1978.
18. **Geyer, M.A.**, Dawsey, W.J., and Mandell, A.J.: Fading: A new cytofluorimetric measure quantifying serotonin in the presence of catecholamines at the cellular level in brain. *Journal of Pharmacology and Experimental Therapeutics*, 207:650-667, 1978.
19. Braff, D.L., Stone, C., Callaway, E., **Geyer, M.A.**, Glick, I.D., and Bali, L.: Prestimulus effects on human startle reflex in normals and schizophrenics. *Psychophysiology*, 15:339-343, 1978.
20. **Geyer, M.A.**, Rose, G.J. and Petersen, L.R.: Mescaline increases startle responding equally in normal and raphe-lesioned rats. *Pharmacology, Biochemistry and Behavior*, 10:293-298, 1979.
21. **Geyer, M.A.** and Light, R.K.: LSD-induced alterations of investigatory responding in rats. *Psychopharmacology*, 65:41-47, 1979.
22. **Geyer, M.A.**, Light, R.K., Rose, G.J., Petersen, L.R., Horwitt, D.D., Adams, L.M., and Hawkins, R.L.: A characteristic effect of hallucinogens on investigatory responding of rats. *Psychopharmacology*, 65:35-40, 1979.
23. Warbritton, J.D., **Geyer, M.A.**, Jeppsson, B., and Fischer, J.E.: A behavioral model of early hepatic encephalopathy in the end-to-side portacaval shunted rat. *Surgical Forum*, 30:394-396, 1979.
24. **Geyer, M.A.**: Both indoleamine and phenylethylamine hallucinogens increase serotonin in both dorsal and median raphe neurons. *Life Sciences*, 26:431-434, 1980.

25. Warbritton, J.D., **Geyer, M.A.**, Jeppsson, B., and Fischer, J.E.: Decreased startle reactivity in the end-to-side portacaval shunted rat. *Pharmacology, Biochemistry and Behavior*, 12:739-742, 1980.
26. Braff, D.L. and **Geyer, M.A.**: Acute and chronic LSD effects on rat startle: Data supporting an LSD-rat model of schizophrenia. *Biological Psychiatry*, 15:909-916, 1980.
27. Lee, E.H.Y. and **Geyer, M.A.**: Persistent effects of chronic administration of LSD on intracellular serotonin content in rat midbrain. *Neuropharmacology*, 19:1005-1007, 1980.
28. **Geyer, M.A.**, Petersen, L.R., and Rose, G.J.: Effects of serotonergic lesions on investigatory responding by rats in a holeboard. *Behavioral and Neural Biology*, 30:160-177, 1980.
29. Adams, L.M. and **Geyer, M.A.**: Effects of 6-hydroxydopamine lesions of locus coeruleus on startle in rats. *Psychopharmacology*, 73:394-398, 1981.
30. **Geyer, M.A.**: Effects of levonantradol on habituation of startle in rats. *Journal of Clinical Pharmacology*, 21:235S-239S, 1981.
31. Ward, H.W., Pollare, T., and **Geyer, M.A.**: Effects of caffeine on tactile startle in rats. *Pharmacology Biochemistry and Behavior*, 15:875-877, 1981.
32. **Geyer, M.A.** and Braff, D.L.: Habituation of the blink reflex in normals and schizophrenic patients. *Psychophysiology*, 19:1-6, 1982.
33. **Geyer, M.A.**, Flicker, C.E., and Lee, E.H.Y.: Effects of tactile startle on serotonin content of midbrain raphe neurons in rats. *Behavioural Brain Research*, 4:369-376, 1982.
34. Flicker, C. and **Geyer, M.A.**: The hippocampus as a possible site of action for increased locomotion during intracerebral infusions of norepinephrine. *Behavioral and Neural Biology*, 34:421-426, 1982.
35. Flicker, C. and **Geyer, M.A.**: Behavior during hippocampal microinfusions: I. Norepinephrine and diversive exploration. *Brain Research Reviews*, 4:79-103, 1982.
36. Flicker, C. and **Geyer, M.A.**: Behavior during hippocampal microinfusions: II. Muscarinic locomotor activation. *Brain Research Reviews*, 4:105-127, 1982.
37. Flicker, C. and **Geyer, M.A.**: Behavior during hippocampal microinfusions: III. Lidocaine versus picrotoxin. *Brain Research Reviews*, 4:129-136, 1982.
38. Flicker, C. and **Geyer, M.A.**: Behavior during hippocampal microinfusions: IV. Transmitter interactions. *Brain Research Reviews*, 4:137-147, 1982.
39. Adams, L.M. and **Geyer, M.A.**: LSD-induced alterations in locomotor patterns and exploration in rats. *Psychopharmacology*, 77:179-185, 1982.
40. Lee, E.H.Y. and **Geyer, M.A.**: Selective effects of apomorphine on dorsal raphe neurons: A cytofluorimetric study. *Brain Research Bulletin*, 9:719-725, 1982.
41. **Geyer, M.A.**: Variational and probabalistic aspects of exploratory behavior in space: Four stimulant styles. *Psychopharmacology Bulletin*, 18:48-51, 1982.

42. Zheng, S., Berman, H.A., and **Geyer, M.A.**: Behavior during hippocampal microinfusions: Anticholinesterase-induced locomotor activation. *Behavioural Brain Research*, 9:295-304, 1983.
43. Lee, E.H.Y. and **Geyer, M.A.**: Similarities of the effects of apomorphine and 3-PPP on serotonin neurons. *European Journal of Pharmacology*, 94:297-303, 1983.
44. Lee, E.H.Y. and **Geyer, M.A.**: Indirect effects of apomorphine on serotonergic neurons. *Neuroscience*, 11:437-442, 1984.
45. Lee, E.H.Y. and **Geyer, M.A.**: Dopamine autoreceptor mediation of the effects of apomorphine on serotonin neurons. *Pharmacology, Biochemistry and Behavior*, 21:1-11, 1984.
46. **Geyer, M.A.**, Gordon, J., and Adams, L.M.: Depletions of central norepinephrine by intraventricular xylamine in rats. *European Journal of Pharmacology*, 100:227-231, 1984.
47. **Geyer, M.A.**, Segal, D.S., and Greenberg, B.D.: Increased startle responding in rats treated with phencyclidine. *Neurobehavioral Toxicology and Teratology*, 6:1-4, 1984.
48. **Geyer, M.A.** and Lee, E.H.Y.: Effects of clonidine, piperoxane, and locus coeruleus lesion on the serotonergic and dopaminergic systems in raphe and caudate nucleus. *Biochemical Pharmacology*, 33:3399-3404, 1984.
49. Adams, L.M. and **Geyer, M.A.**: A proposed animal model for hallucinogens based on LSD's effects on patterns of exploration in rats. *Behavioral Neuroscience*, 5:881-900, 1985.
50. Adams, L.M. and **Geyer, M.A.**: Effects of DOM and DMT in a proposed animal model of hallucinogenic activity. *Progress in Neuropsychopharmacology and Biological Psychiatry*, 9:121-132, 1985.
51. Adams, L.M. and **Geyer, M.A.**: Patterns of exploration in rats distinguish lisuride from lysergic acid diethylamide. *Pharmacology, Biochemistry and Behavior*, 23:461-468, 1985.
52. Gately, P.F., Poon, S.L., Segal, D.S., and **Geyer, M.A.**: Serotonin depletions induced by 5,7-dihydroxytryptamine alter the response to amphetamine and the habituation of locomotor activity in rats. *Psychopharmacology*, 87:400-405, 1985.
53. **Geyer, M.A.**, Gordon, J., and Adams, L.M.: Behavioral effects of xylamine-induced depletions of brain norepinephrine: Interaction with LSD. *Pharmacology, Biochemistry and Behavior*, 23:619-625, 1985.
54. **Geyer, M.A.**, Butcher, R.E., and Fite, K.: A study of startle and locomotor activity in rats exposed prenatally to methylmercury. *Neurobehavioral Toxicology and Teratology*, 7:759-765, 1985.
55. Buelke-Sam, J., Kimmel, C.A., Adams, J., Nelson, C.J., Vorhees, C.V., Wright, D., St. Omer, V., Korol, B., Butcher, R.E., **Geyer, M.A.**, Holson, J.F., Kutscher, C., and Wayner, M.: Collaborative behavioral teratology study: Results. *Neurobehavioral Toxicology and Teratology*, 7:591-624, 1985.
56. **Geyer, M.A.** and Reiter, L.W.: Strategies for the selection of test methods. *Neurobehavioral Toxicology and Teratology*, 7:661-662, 1985.

57. Ruff, R.M., Cox, D.R., **Geyer, M.A.**, and Braff, D.L.: Attentional and information processing deficits in head injured and schizophrenic patients. *Journal of Clinical and Experimental Neuropsychology*, 7:645-646, 1985.
58. Swerdlow, N.R., Braff, D.L., **Geyer, M.A.**, and Koob, G.F.: Central dopamine hyperactivity in rats mimics abnormal sensory gating of the acoustic startle response in schizophrenics. *Biological Psychiatry*, 21:23-33, 1986.
59. Gately, P.F., Segal, D.S., and **Geyer, M.A.**: The behavioral effects of depletions of brain serotonin induced by 5,7-dihydroxytryptamine vary with time after administration. *Behavioral and Neural Biology*, 45:31-42, 1986.
60. Swerdlow, N.R., **Geyer, M.A.**, Vale, W.W., and Koob, G.F.: Corticotropin-releasing factor potentiates acoustic startle in rats: Blockade by chlordiazepoxide. *Psychopharmacology*, 88:147-152, 1986.
61. **Geyer, M.A.**, Russo, P.V., and Masten, V.L.: Multivariate assessment of locomotor behavior: Pharmacological and behavioral analyses. *Pharmacology, Biochemistry and Behavior*, 25:277-288, 1986.
62. Rettig, R., **Geyer, M.A.**, and Printz, M.P.: Cardiovascular concomitants of tactile and acoustic startle responses in spontaneously hypertensive and normotensive rats. *Physiology and Behavior*, 36:1123-1128, 1986.
63. Edery, H., **Geyer, M.A.**, Taylor, P., and Berman, H.A.: Target sites for anticholinesterases on the ventral surface of the medulla oblongata: Hypotension elicited by organophosphorus agents. *Journal of Autonomic Pharmacology*, 6:195-205, 1986.
64. **Geyer, M.A.**, Masten, V.L., and Segal, D.S.: Behavioural effects of xylamine-induced depletions of brain norepinephrine: Interaction with amphetamine. *Behavioural Brain Research*, 21:55-64, 1986.
65. **Geyer, M.A.**: The role of serotonin in behavior? An unfulfilled promise. *The Behavioral and Brain Sciences*, 9:338-339, 1986.
66. Gately, P.F., Segal, D.S., and **Geyer, M.A.**: Sequential changes in behavior induced by continuous infusions of amphetamine in rats. *Psychopharmacology*, 91:217-220, 1987.
67. Lee, E.H.Y., Wang, F.B., Tang, Y.P., and **Geyer, M.A.**: GABAergic interneurons in the dorsal raphe mediate the effects of apomorphine on serotonergic system. *Brain Research Bulletin*, 18:345-353, 1987.
68. **Geyer, M.A.** and Braff, D.L.: Startle habituation and sensorimotor gating in schizophrenia and related animal models. *Schizophrenia Bulletin*, 13:643-668, 1987.
69. Kim, S., Kim, D.J., **Geyer, M.A.**, and Howell, S.B.: Multivesicular liposomes containing 1-b-D-arabinofuranosylcytosine for slow-release intrathecal therapy. *Cancer Research*, 47:3935-3937, 1987.
70. **Geyer, M.A.**, Russo, P., Segal, D.S., and Kuczenski, R.: Effects of apomorphine and amphetamine on patterns of locomotor and investigatory behavior in rats. *Pharmacology, Biochemistry and Behavior*, 28:393-399, 1987.
71. Mansbach, R.S., **Geyer, M.A.**, and Braff, D.L.: Dopaminergic stimulation disrupts sensorimotor gating in the rat. *Psychopharmacology*, 94:507-514, 1988.

72. **Geyer, M.A.** and Frampton, S.F.: Peripheral mediation of effects of clenbuterol on locomotor and investigatory behavior in rats. *Pharmacology, Biochemistry and Behavior*, 30:417-420, 1988.
73. **Geyer, M.A.** and Tapson, G.S.: Habituation of tactile startle is altered by drugs acting on serotonin-2 receptors. *Neuropsychopharmacology*, 1:135-147, 1988.
74. Gold, L.H., Koob, G.F., and **Geyer, M.A.**: Stimulant and hallucinogenic behavioral profiles of 3,4-methylenedioxymethamphetamine (MDMA) and N-ethyl-3,4-methylenedioxyamphetamine (MDE). *Journal of Pharmacology and Experimental Therapeutics*, 247:547-555, 1988.
75. Mansbach, R.S. and **Geyer, M.A.**: Blockade of potentiated startle responding in rats by 5-hydroxytryptamine 1A receptor ligands. *European Journal of Pharmacology*, 156:375-383, 1988.
76. Braff, D.L. and **Geyer, M.A.**: Habituation deficits serotonergic function, and schizophrenia: New animal model data. *Psychopharmacology Bulletin*, 24:426-430, 1988.
77. **Geyer, M.A.** and Masten, V.L.: Increases in diversive exploration in rats during hippocampal microinfusions of isoproterenol but not methoxamine. *Physiology and Behavior*, 45:213-217, 1989.
78. Mansbach, R.S., Braff, D.L., and **Geyer, M.A.**: Prepulse inhibition of the acoustic startle response is disrupted by N-ethyl-3,4-methylenedioxyamphetamine (MDEA) in the rat. *European Journal of Pharmacology*, 167:49-55, 1989.
79. Mittman, S.M. and **Geyer, M.A.**: Effects of 5HT-1A agonists on locomotor and investigatory behaviors in rats differ from those of hallucinogens. *Psychopharmacology*, 98:321-329, 1989.
80. Mansbach, R.S. and **Geyer, M.A.**: Effects of phencyclidine and phencyclidine biologs on sensorimotor gating in the rat. *Neuropsychopharmacology*, 2:299-308, 1989.
81. Braff, D.L. and **Geyer, M.A.**: Sensorimotor gating and schizophrenia: Human and animal model studies. *Archives of General Psychiatry*, 47:181-188, 1990.
82. Grillon, C., Courchesne, E., Ameli, R., **Geyer, M.A.**, and Braff, D.L.: Increased distractibility in schizophrenic patients: Electrophysiological and behavioral evidence. *Archives of General Psychiatry*, 47:171-179, 1990.
83. Paulus, M.P., **Geyer, M.A.**, Gold, L.H., and Mandell, A.J.: Application of entropy measures derived from the ergodic theory of dynamical systems to rat locomotor behavior. *Proceedings, National Academy of Sciences*, 87:723-727, 1990.
84. Swerdlow, N.R., Mansbach, R.S., **Geyer, M.A.**, Pulvirenti, L., Koob, G.F., and Braff, D.L.: Amphetamine disruption of prepulse inhibition of acoustic startle is reversed by nucleus accumbens denervation. *Psychopharmacology*, 100:413-416, 1990.
85. Wing, L.L., Tapson, G.S., and **Geyer, M.A.**: 5HT-2 mediation of acute behavioral effects of hallucinogens in rats. *Psychopharmacology*, 100:417-425, 1990.
86. Swerdlow, N.R., Braff, D.L., Masten, V.L., and **Geyer, M.A.**: Schizophrenic-like sensorimotor gating abnormalities in rats following dopamine infusion into the nucleus accumbens. *Psychopharmacology*, 101:414-420, 1990.



87. Peng, R.Y., Mansbach, R.S., Braff, D.L., and **Geyer, M.A.**: A D2 dopamine receptor agonist disrupts sensorimotor gating in rats: Implications for dopaminergic abnormalities in schizophrenia. *Neuropsychopharmacology*, 3:211-218, 1990.
88. Kim, S., Scheerer, S., **Geyer, M.A.**, and Howell, S.B.: Direct cerebrospinal fluid delivery of an antiretroviral agent using multivesicular liposomes. *Journal of Infectious Diseases*, 162:750-752 1990.
89. **Geyer, M.A.**, Swerdlow, N.R., Mansbach, R.S., and Braff, D.L.: Startle response models of sensorimotor gating and habituation deficits in schizophrenia. *Brain Research Bulletin*, 25:485-498, 1990.
90. Callaway, C.W., Wing, L.L., and **Geyer, M.A.**: Serotonin release contributes to the locomotor stimulant effects of 3,4-methylenedioxymethamphetamine (MDMA) in rats. *Journal of Pharmacology and Experimental Therapeutics*, 254:456-464, 1990.
91. Gold, L.H., Koob, G.F., and **Geyer, M.A.**: Spatial pattern analysis reveals similarities between amphetamine conditioned and unconditioned locomotion. *Behavioural Pharmacology*, 1:209-220, 1990.
92. Davis, M., Mansbach, R.S., Swerdlow, N.R., Campeau, S., Braff, D.L., and **Geyer, M.A.**: Apomorphine disrupts the inhibition of acoustic startle induced by weak prepulses in rats. *Psychopharmacology*, 102:1-4, 1990.
93. Swerdlow, N.R., Braff, D.L., and **Geyer, M.A.**: GABAergic projection from nucleus accumbens to ventral pallidum mediates dopamine-induced sensorimotor gating deficits of acoustic startle in rats. *Brain Research*, 532:146-150, 1990.
94. Butler, R.W., Braff, D.L., Rausch, J.L., Jenkins, M.A., Sprock, J., and **Geyer, M.A.**: Physiological evidence of exaggerated startle response in a subgroup of Vietnam veterans with combat-related post-traumatic stress disorder. *American Journal of Psychiatry*, 147:1308-1312, 1990.
95. Swerdlow, N.R., Keith, V.A., Braff, D.L., and **Geyer, M.A.**: The effects of spiperone, SCH 23390 and clozapine on apomorphine-inhibition of sensorimotor gating of the startle response in the rat. *Journal of Pharmacology and Experimental Therapeutics*, 256:530-536, 1991.
96. Paulus, M.P. and **Geyer, M.A.**: A temporal and spatial scaling hypothesis for the behavioral effects of psychostimulants. *Psychopharmacology*, 104:6-16, 1991.
97. Swerdlow, N.R., Caine, S.B., and **Geyer, M.A.**: Opiate-dopamine interactions in the neural substrates of acoustic startle gating in the rat. *Progress in Neuro-Psychopharmacology and Biological Psychiatry*, 15:415-426, 1991.
98. Lehmann-Masten, V.D. and **Geyer, M.A.**: Spatial and temporal patterning distinguishes the locomotor activating effects of dizocilpine and phencyclidine in rats. *Neuropharmacology*, 30:629-636, 1991.
99. Callaway, C.W., Johnson, M.P., Gold, L.H., Nichols, D.E., and **Geyer, M.A.**: Amphetamine derivatives induce locomotor hyperactivity by acting as indirect serotonin agonists. *Psychopharmacology*, 104:293-301, 1991.
100. Mittman, S.M. and **Geyer, M.A.**: Dissociation of multiple effects of acute LSD on exploratory behavior in rats by ritanserin and propranolol. *Psychopharmacology*, 105:69-76, 1991.

101. Paulus, M.P., **Geyer, M.A.**, and Mandell, A.J.: Statistical mechanics of a neurobiological dynamical system: The spectrum of local entropies ( $S(\alpha)$ ) applied to cocaine-perturbed behavior. *Physica A*, 174:567-577 1991.
102. Braff, D.L., Grillon, C., and **Geyer, M.A.**: Gating and habituation of the startle reflex in schizophrenic patients. *Archives of General Psychiatry*, 49:206-215, 1992.
103. Mansbach, R.S. and **Geyer, M.A.**: Parametric determinants in pre-stimulus modification of acoustic startle: Interaction with ketamine. *Psychopharmacology*, 105:162-168, 1991.
104. Caine, S.B., **Geyer, M.A.**, and Swerdlow, N.R.: Carbachol infusion into the dentate gyrus disrupts sensorimotor gating of startle in the rat. *Psychopharmacology*, 105:347-354, 1991.
105. Keith V.A., Mansbach, R.S., and **Geyer, M.A.**: Failure of haloperidol to block the effects of phencyclidine and dizocilpine on acoustic startle prepulse inhibition. *Biological Psychiatry*, 30:557-566, 1991.
106. Paulus, M.P. and **Geyer, M.A.**: A scaling approach to find order parameters quantifying the effects of dopaminergic agents on unconditioned motor activity in rats. *Progress in Neuro-Psychopharmacology and Biological Psychiatry*, 15:903-919, 1991.
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## **BOOK REVIEWS, COMMENTARIES, AND LETTERS**

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## **GRANTS & CONTRACTS (current in bold)**

National Science Foundation, 1976, "Behavioral and Neurochemical Studies of Effects of Euphorohallucinogens on Rats" (Student-Originated Studies Program, Faculty Advisor).

University of California Instructional Improvement Projects, 1978 – 1979, "Dimensions of Consciousness" (Frontiers of Science Course #133).

National Science Foundation, 1979 – 1982, "Cytofluorimetric Studies of Raphe Neurons" (Principal Investigator).

UCSD Academic Senate, 1979 – 1980, "Startle Measures of Amphetamine Stereotypy" (Principal Investigator).

National Institute of Environmental Health and Safety, 1981 – 1984, "Localization of Site of Organophosphate Toxicity" (Principal Investigator on Subcontract through SUNY, Buffalo).

**National Institute on Drug Abuse, 1981 – 2015, 5 R01 DA002925 "Monoamines & Hallucinogens' Effects on Rodent Behavior" (Principal Investigator), with Minority Supplement Awards to Ms. Stephanie Dulawa, 1996 – 1998, and Ms. Diana Martinez, 1999 – 2000.**

Environmental Protection Agency, 1981 – 1982, "A Longitudinal Study of Early Motor Deficits from Prenatal Exposure to Methyl Mercury" (Principal Investigator on Subcontract through Science Applications Incorporated).

Keck Foundation, 1982 – 1984, "Toward a Theory of Endogenous Biological Dysfunction: Heart, GI Tract and Brain" (Co-Investigator with Dr. Arnold Mandell).

National Center for Toxicological Research, 1982 – 1983, "Interlaboratory Comparison of Standardized Methods in Behavioral Teratology" (Principal Investigator on Subcontract through Science Applications Incorporated).

U. S. Army, 1983 – 1984, "Reactions of Organophosphate Acetyl-Cholinesterase: Mechanisms of Aging, Reactivation, and Sites of Toxicity in CNS" (Co-Investigator with Dr. Harvey Berman).

National Institute on Drug Abuse, 1983 – 1992, R01 "Behavioral Pharmacology of Acute and Chronic Amphetamines" (Co-Investigator with Dr. David Segal).

National Institute of Mental Health, 1983 – 1989, R01 "Hippocampal Transmitter Efficacy After Antidepressants" (Principal Investigator).

National Institute of Mental Health Research Scientist Development Award, Type II, 1983 – 1994, KO2 MH00188 "Limbic Monoamines, Behavior and Psychopathology" (Principal Investigator).

Pfizer Pharmaceutical, 1986 – 1987, "Effect of Putative Anxiolytics on Potentiated Startle in the Rat" (Principal Investigator).

**National Institute of Mental Health, 1987 – 2016, 5 R01 MH042228 "Sensory Gating and Habituation in Schizophrenia" (Co-investigator with Drs. David Braff (PI) and Neal Swerdlow). MERIT Awardee, 1993 – 2003.**

Scottish Rite Schizophrenia Research Program, 1987 – 1990, "An Animal Model of Information Processing in Schizophrenia" (Principal Investigator).

Scottish Rite Schizophrenia Research Program, 1988 – 1991, "The Neurophysiological Basis of Sensory Gating Deficits in Schizophrenia" (Co-Investigator with Dr. David Braff).



- Gensia Pharmaceuticals, Inc., 1989 – 1990, "Motor Activity Effects of GP-2-121-3" (Principal Investigator).
- National Institute on Drug Abuse, 1990 – 1993, R01 DA06325 "Drugs of Abuse--Complexity Measures Classify Behavior" (Principal Investigator).
- National Institute of Mental Health, 1990 – 1991, "Dynamical Systems in the Neurosciences of Psychiatry" (Program Director, Institutional NRSA Training Grant).
- National Institutes of Health Fogarty International Center, 1992 – 1995, 5F06TW001813-03 "Prepulse Inhibition in Rats Reared in Isolation" (Principal Investigator, Senior International Fellowship, with Dr. Trevor Robbins, University of Cambridge, U.K.).
- National Institute of Mental Health Research Scientist Award, 1994 – 1999, K05MH001223 "Limbic Monoamines, Behavior and Psychopathology" (Principal Investigator).
- National Institute of Mental Health, 1995 – 2011, 5 R01 MH052885 "Developmental Models of Gating Deficits in Schizophrenia" (Principal Investigator), with a Minority Supplement Award to Ms. Diana Martinez.
- National Institute of Mental Health, 2009 – 2011, 3 R01 MH052885-13S1 "Developmental Models of Gating Deficits in Schizophrenia" (Principal Investigator), Diversity Supplement Award for Dr. Javier Perez.
- National Institute of Mental Health, 2009 – 2010, 3 R01 MH052885-13S2 "Developmental Models of Gating Deficits in Schizophrenia" (Principal Investigator), NIH-RAID Administrative Supplement for Preclinical Efficacy Testing of Candidate Therapeutics.
- National Institute on Drug Abuse, 1995 – 1998, R01 "Drugs of Abuse in Serotonin Receptor Knock-Out Mice" (Principal Investigator on Subcontract to Columbia University, with Dr. Rene Hen).
- NARSAD Established Investigator Award, 1996 – 1997, "Dopamine D4 Knockout Mice: Relevance to Animal Models of Gating Deficits in Schizophrenia" (Principal Investigator).
- National Institute on Drug Abuse, 1997 – 2001, 5 R01 DA011277 "Effects of Drugs of Abuse on Behavioral Organization" (Co-Investigator with Dr. Martin Paulus).
- National Institute of Mental Health, 1997 – 2000, 5 R01 MH053484 "Cortico-Striatal Substrates of Deficient Startle Gating" (Co-Investigator with Dr. Neal Swerdlow).
- Department of Veterans Affairs, 1997 – indefinite, "Functional Outcome in Chronic Psychosis", Veterans Integrated Service Network (VISN) 22 Mental Illness Research, Education, and Clinical Center (MIRECC) (Director, Neuropsychopharmacology Unit; Investigator, Clinical Neuroscience Unit).**
- NARSAD, 1999 – 2001, Young Investigator Award to Dr. Kirsten Krebs-Thomson, "Functional Neuroanatomy of Prepulse Inhibition of the Startle Response in Normals and Patients with Schizophrenia" (Mentor).
- National Institute of Mental Health, 2000 – 2006, 5 R01 MH061326, "Startle Gating and Locomotion in D2-Family Knockout Mice" (Principal Investigator).
- National Institute of Mental Health, 2000 – 2005, 5 R01 MH061326, Administrative Supplement for the generation of new mutant mice strains, "Startle Gating and Locomotion in D2-Family Knockout Mice" (Principal Investigator).
- National Institute on Drug Abuse, 2001 – 2005, 5 R21 DA014200 "MDMA & Amphetamine: Behavioral Organization in Mice" (Co-Investigator with Dr. Martin Paulus).
- Glaxo Smith Kline, 2002 – 2004, "An investigation of the efficacy of lamotrigine and other anticonvulsants in rodent models of prepulse inhibition" (Principal Investigator).

National Institute of Mental Health, 2002 – 2005, NIMH Contract “Measurement and Treatment Research to Improve Cognition in Schizophrenia” (MATRICS) (Investigator, Co-Chair of Neuropharmacology Committee, Chair of New Approaches Committee).

National Institute of Mental Health, 2003 – 2007, 1 R21 MH068611, “Models of Antipsychotic Prophylaxis for Schizophrenia” (Co-Investigator with Dr. Susan Powell).

AstraZeneca 2003 – 2004, “Predicting Antipsychotic Utility in At-Risk Individuals; Startle Gating in Clinically Normal ‘Low Gating’ Subjects” (Co-investigator with Dr. Neal Swerdlow).

Glaxo Smith Kline 2004 – 2007, “Effects of apomorphine and phencyclidine on prepulse inhibition in the young and adult guinea pig” (Principal Investigator).

NARSAD, 2004 – 2007, Young Investigator Award to Dr. Susan Powell, “Exploring the Role of Dopamine D4 Receptors in Novelty Responses: A Potential Animal Model for ADHD” (Mentor).

**National Institute of Mental Health, 2004 – 2015, 5 R01 MH071916, “Inhibitory Deficits in Mania and Hyperdopaminergic Mice” (Multi-Principal Investigator with Dr. William Perry)**

National Institute of Mental Health, 2004 – 2009, NIMH Contract “Treatment Units for Research on Neurocognition in Schizophrenia” (TURNS) (Investigator; Member, Scientific Operations Unit, Compound Selection Committee, and Biomarkers Development Subcommittee; Chair, Preclinical Subcommittee).

National Institute of Mental Health, 2006 – 2010, 1 R01 MH073991, “Sp4 Pathway in Hippocampus Modulates Sensorimotor Gating” (Principal Investigator)

**National Institute of Mental Health, 2010 – 2015, 1 R01 MH073991-05, “Sp4 Pathway in Hippocampus Modulates Sensorimotor Gating” (Co-Investigator with Dr. Xianjin Zhou)**

NARSAD, 2005 – 2007, Young Investigator Award to Dr. Xianjin Zhou, “Studies on the Role of Human GRK3 in Bipolar Disorder” (Co-Mentor with Dr. John Kelsoe).

National Institute of Mental Health, 2006 – 2009, 1 R01 MH074697, “Stress and CRF System Effects on Information Processing” (Principal Investigator)

**National Institute of Mental Health, 2010 – 2015, 1 R01 MH074697-04, “Stress and CRF System Effects on Information Processing” (Co-Investigator with Dr. Victoria Risbrough)**

National Institute of Mental Health, 2006 – 2008, 1 R21 MH076850, “Murine Model of CRF effects on fear extinction: relevance to PTSD” (Co-Investigator with Dr. Victoria Risbrough).

NARSAD, 2006 – 2009, Young Investigator Award to Dr. Victoria Risbrough, “Influences of the serotonin transporter gene on anxiety endophenotypes” (Co-Mentor with Dr. Murray Stein).

National Institute of Mental Health, 2006 – 2007, 1 R13 MH078663-01, “Serotonin Club IUPHAR Satellite Meeting” (Principal Investigator)

**Department of Veterans Affairs, 2006 – indefinite, “Center of Excellence for Stress and Mental Health”, San Diego Veteran’s Administration Hospital (Associate Chief, Psychophysiology Unit).**

National Institute of Mental Health, 2006 – 2008, 1 R13 MH078710, “Cognitive Neuroscience measures of Treatment Response of Impaired Cognition in Schizophrenia” (CNTRICS) Program. (Member, Executive Committee).

Intracellular Technologies, Inc., 2007 – 2009, “Studies of PCP-induced Deficits in Prepulse Inhibition” (Principal Investigator).

Veteran’s Administration 7/2007 – 7/2012, HSR&D # SDR 07-326, “Prospective Study of the Psychological, Social, and Biological Markers (Genetic Determinants) of Risk and Resilience for

- Operational Stress in Marines” Dr. Dewleen Baker, PI (Co-Investigator and co-director with Dr. Victoria Risbrough of Project 2)
- National Institute of Mental Health, 2008 – 2011, 1 R21/R33 MH083499, “Understanding the Role of COMT Variants in Sensorimotor Gating” (Co-Investigator with Dr. Victoria Risbrough and Dr. Xianjin Zhou).
- National Institute of Mental Health, 2008 – 2010, 1 R21 MH081037, “Striatal Dopamine D1 Functions on Modulating Prepulse Inhibition” (Co-Investigator with Dr. Xianjin Zhou).
- NARSAD, 2008 – 2010, Young Investigator Award to Dr. Jared Young, “Improving mouse sustained attention via stimulation of  $\alpha 7$  nicotinic acetylcholine receptors” (Mentor).
- National Institute on Drug Abuse, 2009 – 2011, 1 F32 DA024524 "Inhibitory Deficits in Bipolar Disorder and Methamphetamine Dependence" (Mentor on NRSA training award to Dr. Brook Henry).
- National Institute on Drug Abuse, 2009 – 2012, 1 F32 DA025412 "Mechanisms of hallucinogen effects on exploratory behavior in rats and mice" (Mentor on NRSA training award to Dr. Adam Halberstadt).
- National Institute of Mental Health, 2009 – 2011, 1 R21 MH086075, “Mice Harboring Human DISC1-Boymaw Fusion Transcripts” (Co-Investigator with Dr. Xianjin Zhou).
- National Institute on Drug Abuse, 09/30/2009 – 05/31/2014, 1 P50 DA026306, “Translational Methamphetamine AIDS Research Center” (TMARC); (Co-investigator on Project 1, Igor Grant, PI)**
- National Institute of Mental Health, 2009 – 2011, 1 R21 MH085221, “The Rodent Continuous Performance Task: Filling the Vigilance Translational Gap” (Co-Investigator with Dr. Jared Young).
- NARSAD, 2009 – 2011, Young Investigator Award to Dr. Jodi Gresack, “Age-dependent effect of CRF over-expression on vulnerability to PTSD-like behavioral and hippocampal pathology” (Co-Mentor with Dr. V. Risbrough).
- National Institute of Mental Health, 2010 – 2015, 1 R01 MH091407, “Sensitive and Treatable Periods of Brain-Redox Imbalance in Schizophrenia” (Co-Investigator with Drs. Marga Behrens and Susan Powell, mPIs)**
- National Institute of Mental Health, 2011 – 2014, 1 R01 MH093500 “Genomic Predictors of Combat Stress Vulnerability and Resilience” (Co-Investigator with Nievergelt, C, PI)**
- Naval Medical Logistics Command, 9/2011 – 10/2013, Contract N62645-11-C-4037-P00003, “Marine Resiliency Study II” (Co-Investigator with Dr. Dewleen Baker, PI), Director, Project 3 (of 3 Projects)**
- NARSAD, 2013 – 2015, Young Investigator Award to Dr. Adam Halberstadt, “Role of the prefrontal cortex in serotonergic regulation of interval timing” (Mentor).**
- NARSAD, 2013 – 2015, Young Investigator Award to Dr. Jared Young, “Speeding ‘eureka’: Investigating the alpha 7 nicotinic receptor as a target for pharmacological augmentation of cognitive remediation in schizophrenia” (Mentor).**

## PATENTS

U.S. Provisional Application Serial No. *60/806,060* filed on **June 28, 2006**, “**HUMAN OPEN FIELD AND EXPLORATORY PARADIGM, AND METHOD OF USE THEREOF**”.

**PREVIOUS AND CURRENT PRE-DOCTORAL STUDENTS:**

- Charles Flicker, Ph.D.** 1978 – 1981 (Neurosciences, UCSD); Dissertation: "Behavioral effects of hippocampal infusions of norepinephrine and carbachol in rats."
- Laura Kush, M.A.** 1979 – 1981 (Psychology, San Diego State University); Thesis: "The effects of 5,7-dihydroxytryptamine and desmethylimipramine on locomotion and investigatory responding by rats in a holeboard."
- Eminy H-Y. Lee, Ph.D.;** 1978 – 1982 (Neurosciences, UCSD); Dissertation: "Serotonergic actions of apomorphine: A combined cytofluorimetric and biochemical study."
- Lynne M. Adams, M.D./Ph.D.;** 1979 – 1983 (Neurosciences, UCSD); Dissertation: "LSD-induced alterations in spatial and temporal patterns of exploratory activity: Possible animal model of its effects on mood and perception". Individual NIDA NIH NRSA Research Fellowship Awardee.
- Paul Gately, M.D.** 1984 – 1985 (Medical School Research Fellow)
- Patrick Russo, Ph.D.** 1984 – 1986 (Neurosciences - with Dr. Arnold Mandell, UCSD); Dissertation: "The characterization of rat brain tyrosine hydroxylase and rat locomotor behavior: The application of nonlinear dynamic concepts."
- Lisa H. Gold, Ph.D.;** 1986 – 1989 (Neurosciences - with Dr. George Koob, UCSD); Dissertation: "Neuropsychopharmacology of conditioned hyperactivity." Individual NIDA NIH NRSA Research Fellowship Awardee.
- Clifton W. Callaway, M.D./Ph.D.;** 1989 – 1992 (Neurosciences, UCSD); Dissertation: "Behavioral effects of serotonin release by substituted derivatives of amphetamine". Individual NIDA NIH NRSA Research Fellowship Awardee.
- Thomas E. Sipes, M.D./Ph.D.;** 1991 – 1995 (Neurosciences, UCSD); Dissertation: "Serotonergic mechanisms of sensorimotor inhibition." Individual NIMH NIH NRSA Research Fellowship Awardee.
- Kirsten Krebs Thomson, Ph.D.;** 1991 – 1996 (Psychology, UCSD); Dissertation: "Multiple serotonin receptor influences in the behavioral effects of hallucinogens in rats: The role of 5-HT1A and 5-HT2 receptors". Individual NIMH NIH NRSA Research Fellowship Awardee.
- Vaishali P. Bakshi, Ph.D.;** 1992 – 1998 (Neurosciences, UCSD); Dissertation: "Neural substrates of phencyclidine-induced deficits in sensorimotor gating in the rat". Individual NIMH NIH NRSA Research Fellowship Awardee.
- Diana L. Price (nee Martinez), Ph.D.;** 1995 – 2000 (Neurosciences, UCSD); Dissertation: "Identification and localization of neural substrates underlying RU 24969-induced changes in locomotor activity and investigatory behavior in rats". NIDA and NIMH Minority supplement Awardee.
- Stephanie C. Dulawa, Ph.D.;** 1995 – 2000 (Neurosciences, UCSD); Dissertation: "The Neural Substrates of Sensorimotor Gating in Serotonin Receptor Mutant Mice". Individual NIMH NIH NRSA Research Fellowship Awardee. NIDA Minority supplement Awardee.
- Rebecca Ralph-Williams (nee Ralph), Ph.D.;** 1996 – 2001 (Neurosciences, UCSD); Dissertation: "Dopamine Modulation of Prepulse Inhibition and Locomotor Behavior in Knockout Mice," Individual NIMH NIH NRSA Research Fellowship Awardee.
- Suzanne Brody (nee Henry), Ph.D.;** 1999 – 2003 (Neurosciences, UCSD); Dissertation: "Role of Metabotropic Glutamate Receptors in Prepulse Inhibition of Startle," Individual NIMH NIH NRSA Research Fellowship Awardee.

**Victoria Risbrough, Ph.D.**; 2000 – 2004 (Neurosciences, UCSD), Dissertation: “CRF and Serotonin 1A Receptor Influences on Defensive Startle Behaviors”. Individual NIMH NRSA Research Fellowship Awardee.

**Jacob Ong, M.S.**; 2002 – 2005 (Neurosciences, UCSD), Bill Gates Fellow.

**Rael Cahn, Ph.D.**; 2003 – 2006 (Neurosciences, UCSD), Dissertation: “The Neurophysiological Correlates to Sensory and Cognitive Processing in Altered States of Consciousness”. William James Fellowship Awardee and NIMH Medical Scientist Training Program Awardee.

**Jordy van Enkhuizen**, 2011 – present, Ph.D. student in University of Utrecht Graduate Program in Psychopharmacology

**Kerin Higa**, 2012 – present, UCSD Neurosciences Ph.D. Program graduate student

#### **PREVIOUS AND CURRENT POST-DOCTORAL STUDENTS:**

**Shen Zheng, Ph.D.**; 1982 – 1983, visiting scholar, Peking University.

**Joseph Springer, Ph.D.**; 1985.

**Robert Mansbach, Ph.D.**; 1986 – 1988.

**Christian Grillon, Ph.D.**; 1987 – 1988 (with Dr. David Braff).

**Lauren Wing, Ph.D.**; 1988 – 1989.

**Martin Paulus, M.D.**; 1989 – 1994, 1996 – 1997.

**Neal Swerdlow, M.D./Ph.D.**; 1989 – 1990.

**Diane Filion Ph.D.**; 1990 – 1993 (with Dr. David Braff).

**Kirsten Krebs Thomson, Ph.D.**; 1996 – 1999.

**Geoff Varty, Ph.D.**; 1996 – 1998.

**Susan B. Powell, Ph.D.**; 2000 – 2003, NARSAD Young Investigator Awardee

**Alexander Kadner, Ph.D.**; 2002 – 2003

**Victoria Risbrough, Ph.D.**; 2004 – 2005, NARSAD Young Investigator Awardee

**Jared Young, Ph.D.**; 2006 – 2009, NARSAD Young Investigator Awardee

**Brook Henry, Ph.D.**; 2006 – 2012 (with Dr. William Perry), NIDA NRSA Postdoctoral Trainee

**Adam Halberstadt, Ph.D.**; 2007 – 2012, NIDA NRSA Postdoctoral Trainee, NARSAD Young Investigator Awardee

**Jodi Gresack, Ph.D.**; (with Dr. Victoria Risbrough), 2007 – 2011, NARSAD Young Investigator Awardee

**Vikas Duvvuri, M.D./Ph.D.**; (with Dr. Walter Kaye), 2007 – 2010

**Javier Perez, Ph.D.**; (with Dr. Victoria Risbrough), 2009 – 2010, NIMH Diversity Supplement Awardee

**Dean Acheson, Ph.D.**; (with Dr. Victoria Risbrough), 2009 – present, MIRECC Postdoctoral Fellow

**Nurith Amitai, Ph.D.**; (with Dr. Jared Young), 2011 – 2012

**PREVIOUS AND CURRENT JUNIOR FACULTY:**

**Kirsten Krebs Thomson, Ph.D.;** Assistant Research Psychobiologist, 1999 – 2001.

**Susan B. Powell, Ph.D.;** Assistant Project Scientist, 2003 – 2007; Assistant Professor, 2007 – 2011;  
Associate Professor, 2011 – present.

**Xianjin Zhou, Ph.D.;** Assistant Project Scientist, 2004 – 2009, Assistant Professor, 2009 – present.

**Victoria Risbrough, Ph.D.;** Assistant Project Scientist, 2005 – 2006; Assistant Professor, 2007 – 2011;  
Associate Professor, 2011 – present.

**Jared Young, Ph.D.;** Assistant Project Scientist, 2009 – 2011, Assistant Professor, 2011 – present.

**Adam Halberstadt, Ph.D.;** Assistant Research Scientist, 2012 – present

**CONSULTING AND ADVISORY BOARDS:**

**Abbott Laboratories, Chicago, IL** – Cognitive Deficits in Schizophrenia Advisory Board, 2003 – 2006.  
Consultant, 2011.

**Acadia Pharmaceuticals, La Jolla, CA** – consultant, research collaborator, 2001 – present. Member,  
Program Evaluation Group 2006 – present.

**Addex Pharmaceuticals, Geneva, Switzerland** – research collaborator, 2004 – 2006, Scientific Advisory  
Board, 2003 – 2012.

**Aktogen Ltd., Cambridge, U.K.** – Scientific Advisory Board, 2004 – 2007.

**Amgen, Thousand Oaks, CA** – consultant, 2007.

**Amylin Pharmaceuticals, San Diego, CA** – consultant, 2008.

**Army STARRS (Army Study to Assess Risk and Resilience in Servicemembers)** – Marine Resiliency  
Study Liaison Observer, Scientific Advisory Board, 2012 – present.

**AstraZeneca, Wilmington, DE** – consultant, 2006.

**Avera Pharma, Del Mar, CA** – consultant, 2002.

**Bayer Pharma AG, Köln, Germany** – consultant, 1997 – 1998.

**Biofrontera Pharmaceuticals, AG, Leverkusen, Germany** – Scientific Advisory Board, 1998 – 2005.

**BRAINco Biopharma, S.L, Bilbao, Spain** – consultant, 2012.

**Bristol-Myers Squibb, NJ** – consultant, 2003.

**Burroughs-Wellcome Company, Research Triangle, NC** – consultant, 1990.

**Cenomed, Irvine, CA** – consultant, 2003 – 2009.

**Cerca Insights (formerly Chakra Biotech), Penang, Malaysia** – Chair, Scientific Advisory Board, 2009 –  
2011.

**Dart Neuroscience, San Diego, CA** – consultant, 2013

**Deltagen, Palo Alto, CA** – consultant, 2002.

**Epix Pharmaceuticals, Lexington, MA (previously Predix)** – consultant, 2005 – 2008.

**European Union's Innovative Medicine Initiative "Novel Methods leading to New Medications in Depression and Schizophrenia"** (NEWMEDS) program, Member, Scientific Advisory Board, 2009 – present.

**Forenap CRO, Rouffach, France** – consultant, research collaborator, 2005 – 2010.

**GlaxoSmithKline, Harlow, UK, Verona, Italy** – consultant, research collaborator, 1992, 1995, 1999 – 2006.

**Hoffman La Roche Pharma, Basel, Switzerland** – consultant, research collaborator 1996 –1998; Member, Psychiatry Expert Group, 2003 – 2005.

**Institut de Recherche Jouveinal, Paris, France** – consultant, 1991.

**Johnson & Johnson Pharmaceutical Research & Development, Raritan, NJ** – Topirimate Working Group, 2002.

**Knoll Pharma, Ludwigshafen, Germany** – consultant, research collaborator, 1995 – 2000.

**Lundbeck S/A, Copenhagen, Denmark** – consultant, 2013.

**Medivation, San Francisco**, consultant 2008 – 2009.

**Merck and Company**. Schizophrenia & Bipolar Disorder Global Therapeutic Expert Forum, 2010.

**National Institute of Mental Health, Board of Scientific Counselors** – committee member, 1998, 2003.

**Neurocrine, Inc.** Consultant, 2012.

**Omeros, Inc., Seattle WA (previously Nura)** – consultant, 2005 – present.

**Organon International CNS Advisory Board** – consultant, 2005 – 2007.

**Psychogenics, Inc., New York, NY** – consultant, 2000 – 2003.

**Repligen Corporation, Waltham, MA** – consultant, 2005 – 2006.

**Roche Biosciences, Palo Alto, CA** – consultant, 2001 – 2005.

**Rockefeller University, Scientific Advisory Board NIMH Conte Center**, "Signaling Mechanisms Underlying Neuroleptic Drug Actions," Dr. Paul Greengard, Principal Investigator, 2007 – 2011.

**San Diego Instruments, Inc., San Diego, CA** – Co-founder, Scientific Advisor, shareholder, 1981 – present.

**Sandoz Pharma, Bern/Basel, Switzerland** – consultant, research collaborator, 1993 – 1996.

**Serono Pharmaceutical Research Institute, Geneva, Switzerland** – consultant, 2005.

**Servier, Paris, France** – Co-organizer, Servier Workshop on New Antipsychotic Targets, 1999; consultant; research collaborator, 1998 – 2001.

**Servier, Paris, France** – Co-organizer, Advances in Neuroscience for Medical Innovation Meeting, Saint Jean Cap Ferrat, March 2009.

**Sibia Pharmaceuticals, La Jolla, CA** – Member, Scientific Advisory Panel, 1996 – 1998.

**Solvay Pharmaceuticals, Weesp, The Netherlands** – consultant; research collaborator, 1992 – 2005.

**Spectrum Pharmaceuticals, Irvine, CA** – consultant, 2002.

**Takeda Pharmaceuticals, Osaka, Japan** – consultant, 2009 – 2011.

**Teva Pharmaceutical Industries, Israel** – consultant, 2008 – 2011.

**University of California Los Angeles** – External Advisory Board, NIH Roadmap Consortium for Neuropsychiatric Phenomics, Dr. Robert Bilder, Principal Investigator, 2009 – 2011.

**University of North Carolina**, Scientific Advisory Board, U19 Center, "Functional Selectivity: A Novel Approach for CNS Drug Discovery", Dr. Bryan Roth, Principal Investigator, 2007 – present.

**University of Pennsylvania, Department of Psychiatry** – External Advisory Board, NIMH Conte Schizophrenia Center, Dr. Raquel Gur, Principal Investigator, 2002 – 2007.

**University of Pittsburgh, Department of Psychiatry, Dr. Walter Kaye** – consultant on NIMH grant, 2001 – 2005.

**Vertex Pharmaceuticals, San Diego, CA** – consultant, 2004.

**Wyeth-Ayerst, Taplow, UK** – consultant, 1992.

**Wyeth-Ayerst, Princeton, NJ** – Neuroscience Scientific Advisory Board, 2006 – 2009.

## **EDITORIAL BOARDS**

*Psychopharmacology*, Managing Editor, 1991 – 2006

*Neuropsychopharmacology*, 1992 – 1995

*Behavioural Pharmacology*, 1994 – 2007

*Behavioural Brain Research*, Guest Editor, Volume 73, 1995

*The Chinese Journal of Physiology*, 1996 – present

*Neuropsychopharmacology*, 1999 – 2006

*Neuropharmacology*, Executive Editor, 2000 – 2006

*Current Drug Targets – CNS & Neurological Disorders*, 2000 – present

*Neurotoxicity Research*, 2003 – present

*Letters in Drug Design and Discovery*, 2003 – 2010

*Current Psychiatry Reviews*, 2004 – present

*Schizophrenia Bulletin*, Associate Editor, 2004 – 2009

*Neuropsychopharmacology*, Associate Editor, 2006 – present

*Acta Neuropsychiatrica*, 2011 – present

## **PROFESSIONAL SOCIETIES**

American Association for the Advancement of Science, Elected Fellow

American College of Neuropsychopharmacology, Elected Fellow

American Psychological Society, Charter Member, Fellow 2010

Associate, The Behavioral and Brain Sciences

European Behavioral Pharmacology Society, Councilor 2008 – 2011

International Behavioral Neuroscience Society, Founding Member, Fellow, President 2002

International Brain Research Organization

Neurobehavioral Teratology Society

Serotonin Club, Charter Member, President 2004-2006

Society for Neuroscience

Society for Psychophysiological Research

Society of Biological Psychiatry

**Fellow**, American College of Neuropsychopharmacology

**Fellow**, International Behavioral Neuroscience Society

**President**, International Behavioral Neuroscience Society, 2002



**Vice-President**, Serotonin Club, 2000 – 2003

**President**, Serotonin Club, 2004 – 2006

**Fellow**, American Association for the Advancement of Science, 2004.

**Fellow**, American Psychological Society, 2010

## UNIVERSITY COMMITTEE AND PUBLIC SERVICE

Member, Recruitment and Admissions Committee, School of Medicine, UCSD

Member, Computing Advising Committee, School of Medicine, UCSD

Member, Department of Neurosciences Minor Proposition Committee, UCSD

Chair, Department of Neurosciences Minor Proposition Committee, 1990, UCSD

Member, Neurosciences Ph.D. Group Admissions Committee, UCSD

Member, Department of Physiology/Pharmacology Minor Proposition Committee, UCSD

Member, Department of Psychiatry Executive Committee, UCSD

Member, UCSD Mental Health CRC Scientific Advisory Committee, UCSD

Chair, UCSD Mental Health CRC Scientific Oversight Committee, UCSD

Member, Faculty Research Committee, School of Medicine, UCSD

Member, Electives Committee, School of Medicine, UCSD

Chair, Electives Committee, School of Medicine, UCSD

Member, Committee on Educational Policy, School of Medicine, UCSD

Chair, Committee on Educational Policy, School of Medicine, UCSD

Vice-Chair, Task Force on Faculty Rewards, School of Medicine, UCSD

Member, Executive Committee for Curriculum Task Forces, School of Medicine, UCSD

Member, Faculty Council, School of Medicine, UCSD

Coordinator, Behavioral Neurosciences NS264 core course, Dept. Neurosciences, UCSD

Coordinator, Neuropsychopharmacology NS277 core course, Dept. Neurosciences, UCSD

Chair, Finance Committee, Neurobehavioral Teratology Society, 1989 – 1991

North American Councilor, Serotonin Club, 1990 – 2004

Scientific Secretariat, 1994 Meeting, Serotonin Club

Member, Publications Committee, International Behavioral Neuroscience Society, 1993 – 1995

Member, Local Organizing Committee, International Behavioral Neuroscience Society, 1997

Member, Editor's Council, International Behavioral Neuroscience Society, 1995 – present

Member, Program Committee, American College of Neuropsychopharmacology, 1995 – 1998

Elected Councilor, Serotonin Club, 1996 – 2000

Member, Program Committee, Society of Biological Psychiatry, 1997 – 1999

Chair, Curriculum Reform Implementation Committee, School of Medicine, UCSD, 1997 – 1999

Member, Chancellor's Task Force on Academic/Industry Relations, UCSD, 1998 – 1999

Member, Program Committee, International Behavioral Neuroscience Society, 2000 – 2003

Member, Health Sciences Subcommittee, Committee on Research, UCSD, 1999 – 2001

Member, Academic Senate Committee on Research, UCSD, 2001 – 2002

Chair, Health Sciences Subcommittee, Committee on Research, UCSD, 2001 – 2002

Member, Honorific Awards Committee, International Behavioral Neuroscience Society, 2002 – 2004

Elected Member, Nominations Committee, School of Medicine, UCSD, 2002 – 2003

Chair, Nominations Committee, School of Medicine, UCSD, 2004 – 2005

Member, ACNP Task Force on *Neuropsychopharmacology* editorship and policies, 2003.

Member, ACNP Liaison Committee, 2007 – 2010.

Elected Councilor 2008 – 2011, European Behavioral Pharmacology Society

Participant, European College of Neuropsychopharmacology Biomarkers Consultancy Meeting, 2009

Elected to Council, ACNP, 2009 – 2011.

## **GRANT REVIEWS**

Canadian Institutes of Health Research  
Environmental Protection Agency  
The Israel Science Foundation  
The Mental Health Foundation, United Kingdom  
The Medical Research Council of Canada  
The Medical Research Council, United Kingdom  
National Center for Toxicological Research  
National Institute of Aging  
National Institute of Dental Research  
National Institute of Health, Mouse Phenotyping Special Review Committee  
National Institutes of Health RC1 Challenge Awards Program, 2009  
National Institute of Mental Health  
National Institute of Mental Health, Chair, Conte Centers on Schizophrenia Special Emphasis Panel, 2001  
National Institute of Mental Health Board of Scientific Counselors, 2000, 2003, 2008  
National Institute on Drug Abuse  
National Science Foundation  
North Atlantic Treaty Organization  
The Ontario Mental Health Foundation  
Qatar National Research Fund (QNRF), 2009  
The Royal Society, U.K.  
Swiss National Science Foundation  
Tourette's Foundation  
U.S. Veterans Administration  
The Wellcome Trust, United Kingdom

**JOURNAL REVIEWS**

American J. Psychiatry  
Archives of General Psychiatry  
Behavioral & Neural Biology  
Behavioral Biology  
Behavioural Brain Research  
Behavioral Neuroscience  
Behaviour  
Behavioural Pharmacology  
Biological Psychiatry  
Biological Psychology  
Brain Research  
Brain Research Bulletin  
Brain Research Reviews  
British J. Pharmacology  
Canadian J. Physiology & Pharmacology  
Cerebral Cortex  
Chinese J. Physiology  
CNS Drug Reviews  
Current Drug Targets –CNS & Neurol Dis  
Current Psychiatry Reviews  
European J. Neuroscience  
European J. Pharmacology  
European Neuropsychopharmacology  
Experimental Neurology  
Genes, Brain, and Behavior  
Hippocampus  
Hypertension  
Int. J. Neuropsychopharmacology  
Int. J. Psychophysiology  
J. Abnormal Psychology  
J. Affective Disorders  
J. Comparative & Physiological Psychology  
J. Neurochemistry  
J. Neuroscience  
J. Neuroscience Methods  
J. Pharmacology & Experimental Therapeutics  
J. Psychiatric Research  
J. Psychopharmacology  
Laboratory Animals  
Life Sciences  
The MIT Press  
Methods & Findings in Exp Clin Pharmacol  
Molecular Psychiatry  
Nature  
Nature Genetics  
Nature Medicine  
Naunyn-Schmiedeberg's Arch Pharmacol  
Neurobehavioral Toxicology & Teratology  
Neurobiology of Aging  
NeuroImage  
Neuron  
Neuropharmacology  
Neuropsychobiology  
Neuropsychopharmacology  
Neuroscience  
Neuroscience and Biobehavioral Reviews  
Neuroscience Letters  
Neurotoxicity Research  
Neurotoxicology and Teratology  
Pharmacology, Biochemistry & Behavior  
Physiology and Behavior  
Proc. Nat'l. Acad. Sciences USA  
Psychiatry Research  
Psychobiology  
Psychological Medicine  
Psychopharmacology  
Psychophysiology  
Psychosomatic Medicine  
Schizophrenia Bulletin  
Schizophrenia Research  
Science  
Stress  
Synapse  
Trends in Neuroscience Research  
Trends in Pharmacological Science