

**BIOGRAPHICAL SKETCH**

Give the following information for the key personnel and consultants and collaborators. Begin with the principal investigator/program director. Photocopy this page for each person.

NAME <b>George R. Breese, Ph.D.</b>		POSITION TITLE <b>Professor, Psychiatry and Pharmacology</b>	
EDUCATION ( <i>Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.</i> )			
INSTITUTION AND LOCATION	DEGREE	YEAR CONFERRED	FIELD OF STUDY
Butler University, Indianapolis	B.S.	1959	Pharmacy
Butler University, Indianapolis	M.S.	1961	Pharmacology
University of Tennessee, Memphis	Ph.D.	1965	Pharmacology
Research Associate in Pharmacology & Toxicology, (Bethesda, MD);NIGMS & NIMH (Dr. I.J. Kopin).	Post-Doc	1966-1968	Pharmacology

**EMPLOYMENT HISTORY**

1962-1964: USPHS Trainee & Teaching Assistant Dept. of Pharmacology, Univ. of Tennessee Med. Unit (Memphis)  
 1964-1965: USPHS Predoctoral Fellow, Dept. of Pharmacology, University of Tennessee Medical Units (Memphis)  
 1965-1966: Instructor in Pharmacology, Dept. of Pharmacology, University of Arkansas Medical School (Little Rock).  
 1968-1972: Assistant Professor of Psychiatry & Pharmacology, Univ. of North Carolina School of Med. (Chapel Hill).  
 1972-1976: Associate Professor of Psychiatry & Pharmacology, Univ. of North Carolina School of Med. (Chapel Hill).  
 1977 to present: Professor of Psychiatry & Pharmacology, University of North Carolina School of Med. (Chapel Hill).  
 1992 to present: Research Professor of Anesthesiology, University of North Carolina School of Med. (Chapel Hill).  
 1968 to present, BDRC & Neuroscience Center, University of North Carolina (Chapel Hill)  
 1990 to present: Research Scientist, Head Neuropharmacology Laboratory, Center for Alcohol Studies, University of North Carolina School of Medicine (Chapel Hill).

**SOCIETIES, HONORS AND AWARDS**

Rho Chi Honor Soc.; Phi Kappa Phi Honor Soc.; Bristol Award; Amer. Soc. for Pharmacol. & Exp. Therap.; Amer. College of Neuro-Psychopharmacology; Among the 1000 Cited Contemporary Scientists , 1965-78; NIH Neuropharmacol. Study Sec. 1976-1980; Career Develop. Awards, NICHD & NIMH, 1969-1980. NIMH Study Sec. 1987-1991; Alcohol and Toxicology Study Sec. 1999-present. Received the 2001 ASPET Award for Experimental Therapeutics.

**PUBLICATIONS (FROM 378)**

Breese, G.R. and Traylor, T.D. Developmental characteristics of brain catecholamines and tyrosine hydroxylase in the rat: Effects of 6-hydroxydopamine. *Brit. J. Pharmacol.* **44**:210-222, 1972.  
 Smith, R.D., Cooper, B.R., Breese, G.R. Growth and behavioral changes in developing rats treated intracisternally with 6-hydroxydopamine: Evidence for involvement of brain dopamine. *J. Pharmacol. Exp. Ther.* **185**:609-619, 1973  
 Criswell, H.E., Simson, P.E., Knapp, D.J., Devaud, L.L., McCown, T.J., Duncan, G.E., Morrow, A.L., and Breese, G.R. The effect of zolpidem on GABA-Induced inhibition predicts the interaction of ethanol with GABA on individual neurons in rat brain. *J. Pharmacol. Exp. Ther.* **273**:526-536, 1995.  
 McCown, T.J., Xiao, X., Li, J., Breese, G.R., and Samulski, R.J. Differential and persistent expression patterns of CNS Gene Transfer by an adeno-associated virus (AAV) vector. *Brain Res.* **713**:99-107, 1996.  
 Overstreet, D.H., Knapp, D.J., and Breese, G.R. Accentuated decrease in social interaction in rats subjected to repeated multiple alcohol withdrawals. *Alcoholism: Clin. Exp. Res.* **26**:1259-1268, 2002  
 Moy, S.S. and Breese, G.R. Phencyclidine supersensitivity in rats with neonatal dopamine loss. *Psychopharmacology* **161**:255-262, 2002.  
 Breese, G.R., Knapp, D.J., and Moy, S.S., Integrative role for serotonergic and glutamatergic receptor mechanisms in the action of NMDA antagonists: Potential relationships to acute and chronic actions of antipsychotic drugs. *Neuroscience and Biobehavioral Reviews* **26**: 441-455, 2002,  
 Visser, J.E., Smith, D.W., Friedmann, T., Rothstein, J.D., Moy, S.S., Breese, G.R. and Jinnah, H.A. Oxidative stress and dopamine deficiency in a genetic mouse model of Lesch-Nyhan disease. *Dev. Brain. Res.* **133**:127-140, 2002  
 Haberman, R.P., Criswell, H.E., Snowdy, S., Ming, Z., Breese, G.R., Samulski, R.J. and McCown, T.J. Therapeutic Liabilities of *In Vivo* Viral Vector Tropism: Adeno-associated Virus (AAV) Vectors, NMDAR 1 Antisense and Focal Seizure Sensitivity. *Molecular Therapy* **6**:495-500, 2002.  
 Criswell, H.E., Ming, Z., Griffin, BL, Mueller, R.A. and Breese, G.R. Comparison of the effect of ethanol on NMDA- and GABA-gated currents from acutely dissociated neurons: Absence of regional differences in sensitivity to ethanol. *J. Pharmacol. Exp. Ther.* **304**:192-199, 2003

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- Fu H., Muenzer, J., Samulski, R.J., Breese, G., Sifford, J. Zeng, X., and McCarty, D. Self-complementary adeno-associated virus serotype 2 vector: Global distribution and broad dispersion of AAV-mediated transgene expression in mouse brain. *Mol Ther.* 8:911-917, 2003.
- Breese, G.R., Overstreet, D.H., Knapp, D.J., Stress sensitization of the ethanol withdrawal-induced reduction in social interaction: inhibition by CRF-1 and benzodiazepine receptor antagonists and a 5-HT<sub>1A</sub> agonist. *Neuropsychopharmacology* 29:470-482,2004
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- Moy, S.S, Fernandes A, Qian Y, Rotella, DL, Kostrewa, RM and Breese, G.R. Acute and chronic treatments with olanzapine and other antipsychotic drugs on phencyclidine-induced sensitization in rats with neonatal dopamine loss. *Pharmacol Biochem Behavior.* 78:47-56, 2004.
- Overstreet, D.H, Knapp, D.J., and Breese, G.R. Similar anxiety-like responses in male and female rats exposed to repeated ethanol withdrawals. *Pharmacol Biochem Behavior* 78:459-64, 2004.
- Papadeas, S., Blake, B., Knapp, D.J., and Breese, G.R. Sustained ERK1/2 phosphorylation in neonate 6-OHDA-lesioned rats following repeated D1-dopamine receptor agonist administration: implications for NMDA receptor involvement. *J. Neurosci.* 24:5863-5876, 2004.
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- Breese, G.R., Overstreet, D.H., Knapp, D.J. Conceptual framework for the etiology of alcoholism—a “kindling”/stress hypothesis. *Psychopharmacology* 178:367-380, 2005.
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