

## **JOHN E. KELSEY**

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### **PERSONAL DATA**

Birth date: September 24, 1944  
Marital Status: Married with two daughters

### **EDUCATION**

B.A. in Psychology, Grinnell College, 1966  
Ph.D. in Biopsychology, University of Chicago, 1971

### **AWARDS AND FELLOWSHIPS**

Phi Beta Kappa  
Valedictorian at Grinnell College  
USPHS Predoctoral Trainee in Experimental-Biological Psychology (1966-1969, 1970-1971)  
NSF Predoctoral Fellow (1969-1970)  
Whitehouse Professor of Psychology (1992-1996)

### **PROFESSIONAL EXPERIENCE**

Professor and Chair of Neuroscience, Bates College, Lewiston, ME (1997-present)  
Professor and Chair of Psychology, Bates College, Lewiston, ME (1996-1998)  
Whitehouse Professor of Psychology, Bates College, Lewiston, ME (1992-1996)  
Professor of Psychology, Bates College, Lewiston, ME (1991-1992) Associate Professor of Psychology, Bates College, Lewiston, ME (1985-1991)  
Assistant Professor of Psychology, Bates College, Lewiston, ME (1979-1985)  
Research Supervisor, Department of Psychopharmacology, Wyeth Laboratories, Philadelphia, PA (1978-1979)  
Assistant Professor of Psychology, Indiana University, Bloomington, IN (1971-1978)

### **PROFESSIONAL ORGANIZATIONS**

American Association for the Advancement of Science  
Faculty for Undergraduate Neuroscience (FUN)  
Sigma Xi: Member of Committee on Grants-in-Aid of Research (1985-1992)  
Society for Neuroscience  
NSF Minority Graduate Fellowship Program: Member of Evaluation Panel (1991-1995)

### **EXTERNAL GRANTS**

Biopsychology: Discovering its techniques and principles. NSF-CSIP grant for \$18,249. Principal investigator. (1986)  
Equipment to teach microprocessor analysis of video and analog signals in an undergraduate physiology laboratory. NSF-CSIP grant for \$30,192. With Laura Malloy, principal investigator, and Bob Thomas. (1987)  
Networking the classroom and microcomputer laboratory to enhance undergraduate training in psychology. NSF-ILI grant for \$44,287. With Drake R. Bradley and Georgia N. Nigro, co-principal investigators. (1988)  
Laboratory course in behavioral endocrinology. NECUSE grant for \$33,250. With Cheryl McCormick. (1993).

## TEACHING EXPERIENCE AND INTERESTS

I have taught both graduate and undergraduate lecture and laboratory courses in physiological psychology and psychopharmacology, and I have taught undergraduate courses in human neurology, introductory psychology, motivation and emotion, animal learning, comparative psychology, and research methods.

## RESEARCH INTERESTS

I am primarily interested in the role of the neurochemical systems within the limbic system in mediating motivation and learning. My current research emphasizes the role of nicotine in mediating addiction and analgesia, and the cognitive and neural deficits in animal models of schizophrenia and Parkinson's disease.

## PUBLICATIONS

### Research Papers:

- Kelsey, J. E., & Grossman, S. P. (1969). Cholinergic blockade and lesions in the ventro-medial septum of the rat. *Physiology and Behavior*, 4, 837-845.
- Hamilton, L. W., Kelsey, J. E., & Grossman, S. P. (1970). Variations in behavioral inhibition following different septal lesions in rats. *Journal of Comparative and Physiological Psychology*, 70, 79-86.
- Kelsey, J. E., & Grossman, S. P. (1971). Nonperseverative disruption of behavioral inhibition following septal lesions in rats. *Journal of Comparative and Physiological Psychology*, 75, 302-311.
- Miczek, K. A., Kelsey, J. E., & Grossman, S. P. (1972). Time course of effects of septal lesions on avoidance, response suppression, and reactivity to shock. *Journal of Comparative and Physiological Psychology*, 79, 318-327.
- Kelsey, J. E. (1975). Role of pituitary-adrenocortical system in mediating avoidance behavior of rats with septal lesions. *Journal of Comparative and Physiological Psychology*, 88, 271-280.
- Kelsey, J. E., & Grossman, S. P. (1975). Influence of central cholinergic pathways on performance on free-operant avoidance and DRL schedules. *Pharmacology Biochemistry and Behavior*, 3, 1043-1050.
- Kelsey, J. E., & Allison, J. (1976). Fixed-ratio lever pressing by VMH rats: Work vs accessibility of sucrose reward. *Physiology and Behavior*, 17, 749-754.
- Kelsey, J. E., & Cassidy, D. (1976). The reinforcing properties of aggressive vs nonaggressive social interactions in isolated male ICR mice (*Mus musculus*). *Aggressive Behavior*, 2, 275-284.
- Kelsey, J. E. (1976). Behavioral effects of intraseptal injections of adrenergic drugs in rats. *Physiological Psychology*, 4, 433-438.
- Kelsey, J. E. (1977). Escape acquisition following inescapable shock in the rat. *Animal Learning and Behavior*, 5, 83-92.
- Hoyman, L., & Kelsey, J. E. (1977). Facilitation of flicker discriminability by electrical stimulation of the mesencephalic reticular formation of the rat. *Journal of Comparative and Physiological Psychology*, 91, 951-961.
- Kelsey, J. E., & Belluzzi, J. D. (1982). Endorphin mediation of post-ictal effects of kindled seizures in rats. *Brain Research*, 253, 337-340.
- Newman, J. P., Gorenstein, E. E., & Kelsey, J. E. (1983). Failure to delay gratification following septal lesions in rats: Implications for an animal model of disinhibitory psychopathology. *Personality and Individual Differences*, 4, 147-156.
- Kelsey, J. E. (1983). The role of norepinephrine and acetylcholine in mediating escape deficits produced by inescapable shocks. *Behavioral and Neural Biology*, 37, 326-331.
- Kelsey, J. E., & Baker, M. D. (1983). Ventromedial septal lesions in rats reduce the effects of inescapable shock on escape performance and analgesia. *Behavioral Neuroscience*, 97, 945-961.
- Kelsey, J. E. (1984). Ventromedial septal lesions in rats reduce stomach erosions produced by inescapable shock. *Physiological Psychology*, 11, 283-286.
- Kelsey, J. E., Belluzzi, J. D., & Stein, L. (1984). Does naloxone suppress self-stimulation by decreasing reward or by increasing aversion? *Brain Research*, 307, 55-59.
- Kelsey, J. E., Hoerman, IV, W. A., Kimball, III, L. D., Radack, L. S., & Carter, M. V. (1986). Arcuate nucleus lesions reduce opioid stress-induced analgesia (SIA) and enhance nonopioid SIA in rats. *Brain Research*, 382, 278-290.
- Kelsey, J. E., & Landry, B. A. (1988). Medial septal lesions disrupt spatial mapping ability in rats. *Behavioral Neuroscience*, 102, 289-293.

Falls, W. A., & Kelsey, J. E. (1989). Procedures that produce context-specific tolerance to morphine in rats also produce context-specific withdrawal. *Behavioral Neuroscience*, 103, 842-849.

Kelsey, J. E., Carlezon, Jr., W. A., & Falls, W. A. (1989). Lesions of the nucleus accumbens in rats reduce opiate reward but do not alter context-specific opiate tolerance. *Behavioral Neuroscience*, 103, 1327-1334.

Kelsey, J. E., Aranow, J. S., & Matthews, R. T. (1990). Context-specific morphine withdrawal in rats: Duration and effects of clonidine. *Behavioral Neuroscience*, 104, 704-710.

Kelsey, J. E., Carlezon, Jr., W. A., & Falls, W. A. (1991). Lesions of the nucleus accumbens in rats reduce opiate reward but do not alter context-specific opiate tolerance. In J. P. J. Pinel (Ed.), *Current research in biopsychology* (pp. 231-242). Needham Heights, MA: Allyn and Bacon. (reprinted with the permission of the American Psychological Association from *Behavioral Neuroscience*, 103, 1327-1334).

Kelsey, J. E., & Vargas, H. (1993). Medial septal lesions disrupt spatial, but not nonspatial, working memory in rats. *Behavioral Neuroscience*, 107, 565-574.

Kelsey, J. E., & Arnold, S. R. (1994). Lesions of the dorsomedial amygdala, but not the nucleus accumbens, reduce the aversiveness of morphine withdrawal in rats. *Behavioral Neuroscience*, 108, 1119-1127.

Wise, R. A., & Kelsey, J. E. (1994). Behavioral models of addiction. In N.S. Miller (Ed.), *Principles of*

*addiction medicine* (chap. . American Society of Addiction Medicine.

Shaham, Y., Kelsey, J. E., & Stewart, J. (1995). Temporal factors in the effect of restraint stress on morphine-induced behavioral sensitization in the rat. *Psychopharmacology*, 117, 102-109.

McCormick, C. M., McNamara, M., Mukhopadhyay, S., & Kelsey, J. E. (1997). Acute corticosterone replacement reinstates performance on spatial and nonspatial memory tasks 3 months after adrenalectomy despite degeneration in the dentate gyrus. *Behavioral Neuroscience*, 111, 518-531.

Wise, R. A., & Kelsey, J. E. (1998). Behavioral models of addiction. In A. W. Graham & T. K. Schultz (Eds.), *Principles of addiction medicine*, 2nd ed. (chap. 3). American Society of Addiction Medicine.

Kelsey, J. E., & Grabarek, J. A. (1999). Medial septal lesions in rats enhance locomotor sensitization to amphetamine. *Psychopharmacology*, 146, 233-240.

Kelsey, J. E., Sanderson, K. L., & Frye, C. A. (2000). Perforant pathway stimulation in rats produces seizures, loss of hippocampal neurons, and a deficit in spatial mapping which are reduced by prior MK-801. *Behavioural Brain Research*, 107, 59-69.

Kelsey, J. E., & Carlezon, Jr., W. A. (2002). Prior experience with bromocriptine in the home cage attenuates locomotor sensitization in rats. *Behavioural Brain Research*, 134, 1-8.

Kelsey, J. E., Beer, T., Lee, E., & Wagner, A. (2002). Low doses of dizocilpine block the development and subsequent expression of locomotor sensitization to nicotine in rats. *Psychopharmacology*, 161, 370-378 .

#### **Book Reviews:**

Kelsey, J. E. (1983). Why study psychopharmacology? *Contemporary Psychology*, 28, 930-931.

Kelsey, J. E. (1985). Teaching first principles of behavioral pharmacology. *Contemporary Psychology*, 30, 320.

Kelsey, J. E. (1986). Contemporary psychopharmacology: A review? *Contemporary Psychology*, 31, 198-199.

#### **Abstracts:**

Kelsey, J. E., Belluzzi, J. D., & Stein, L. (1979). Does naloxone suppress self-stimulation by decreasing reward or increasing aversion? *Society for Neuroscience Abstracts*, 5, 530.

Kelsey, J. E., & Hoerman, IV, W. A. (1981). Effects of lesions of the brain's beta-endorphin system on stress-induced analgesia in rats. *Society for Neuroscience Abstracts*, 7, 166.

Kelsey, J. E., & Kimball, III, L. D. (1983). Arcuate nucleus lesions reduce opiate-mediated stress-induced analgesia (SIA) in rats and enhance nonopiate-mediated SIA. *Society for Neuroscience Abstracts*, 94, 278.

Kelsey, J. E., & McGrath, A. C. (1984). Prior exposure of rats to escapable shocks reduces the immunosuppressive effects of inescapable shocks. *Society for Neuroscience Abstracts*, 10, 723.

Kelsey, J. E., Carlezon, Jr., W. A., & Falls, W. A. (1987). Lesions of the nucleus accumbens in rats reduce opiate reward, but not tolerance. *Society for Neuroscience Abstracts*, 13, 424.

Kelsey, J. E., & Sault, M. M. (1989). Deficits in procedural learning in an animal model of Huntington's Disease. *Society for Neuroscience Abstracts*, 15, 931.

Kelsey, J. E., & Vargas, H. (1990). Medial septal lesions disrupt spatial, but not nonspatial working memory in rats. *Society for Neuroscience Abstracts*, 16, 1246.

- Kelsey, J. E., & Genova, L. (1992). Global ischemia in rats impairs spatial working memory, but not spatial mapping. *Society for Neuroscience Abstracts*, 18, 1581.
- Sanderson, K. L., Frye, C. A., Kelsey, J. E. (1993). MK-801 reduces the seizures, hippocampal neuron loss, and spatial navigation deficit produced by electrical stimulation of the perforant pathway in rats. *Society for Neuroscience Abstracts*, 19, 392.
- Shaham, Y., Kelsey, J. E., & Stewart, J. (1993). Associative factors in stress-induced sensitization to the behavioral activating effects of morphine. *Society for Neuroscience Abstracts*, 19, 1026.
- Kelsey, J. E., & Grabarek, J. K. (1994). Medial septal lesions enhance locomotor sensitization to amphetamine. *Society for Neuroscience Abstracts*, 20, 1029.
- Kelsey, J. E., & Bitner, R. L. (1995). The 5HT1A agonist 8-OH-DPAT attenuates the effects of inescapable shocks on activity, fluid intake, and body weight in rats. *Society for Neuroscience Abstracts*, 21, 195.
- McCormick, C. M., McNamara, M., Kelsey, J. E., & Kleckner, N. W. (1995). Acute corticosterone replacement three-months after adrenalectomy improves performance in a Morris water maze despite degeneration in the dentate gyrus. *Society for Neuroscience Abstracts*, 21, 392.
- Kelsey, J. E., & Johnson, E. P. (1996). Electrolytic lesions of the nucleus accumbens in rats enhance locomotor sensitization to 0.4 mg/kg nicotine. *Society for Neuroscience Abstracts*, 22, 474.
- Kelsey, J. E. & Abelson, S. B. (1997). Failure of the antioxidant PBN to reduce the CA1 damage and enhanced locomotion produced by global ischemia. *Society for Neuroscience Abstracts*, 23, 2186.
- Kelsey, J. E., & Beer, T. (1998). Previous co-administration of MK-801 blocks the expression of locomotor sensitization to nicotine in rats. State dependency? *Society for Neuroscience Abstracts*, 24, 752.
- Kelsey, J. E., Beer, T., & Wagner, A. J. (1999). Co-administration of MK-801 appears to block the development of locomotor sensitization to nicotine in rats. *Behavioural Pharmacology*, 10, Supplement 1, S53.
- Kleckner, N. W., McCormick, C. M., Rioux, T., & Kelsey, J. E. (1999). Undergraduate neuroscience at Bates College: A curriculum based on laboratory science. *Society for Neuroscience Abstracts*, 25, 264.
- Kelsey, J. E., & Ganem, G. S. (2000). Spontaneously Hypertensive Rats (SHR): An animal model of impulsivity in ADHD? *Society for Neuroscience Abstracts*, 26, Program No. 871.5.
- Kelsey, J. E., & Guerriero, R. M. (2001). Amygdala lesions enhance context specific locomotor sensitization to nicotine in rats. *Society for Neuroscience Abstracts*, 27, Program No. 667.5.
- Kleckner, N., W., Mague, S., Pijanowski, R., & Kelsey, J. E. (2001). MK-801 enhances forelimb stepping in the unilateral 6-OHDA-lesioned rat. *Society for Neuroscience Abstracts*, 27, Program No. 430.4.
- Kelsey, J. E., Moran, T., & Winterton, J. (2002). The role of serotonin in PCP-induced behaviors in the hole board apparatus. *Society for Neuroscience Abstracts*, 28, Program No. 494.11.
- Kelsey, J. E., & Gerety, L. P. (in press). Electrolytic lesions of the n. accumbens core, but not shell, enhance context-specific locomotor sensitization to nicotine in rats. *Society for Neuroscience Abstracts*, 29.
- Papers Presented** (since 1986):
- Psychobiology of Alzheimer's disease: Recent developments. Maine Psychological Association, October, 1986.
- Lesions of the nucleus accumbens in rats reduce opiate reward, but not tolerance. With W. A. Carlezon, Jr. and W. A. Falls. Society for Neuroscience Convention, New Orleans, November, 1987.
- Deficits in procedural learning in an animal model of Huntington's Disease. With M. M. Sault. Society for Neuroscience Convention, Phoenix, November 1, 1989.
- Medial septal lesions disrupt spatial, but not nonspatial working memory in rats. With H. Vargas. Society for Neuroscience Convention, St. Louis, November 1, 1990.
- Animal models of opiate addiction: Environmental and physiological bases. University of Southern Maine Colloquia Series, Portland, ME, January 30, 1992.
- Global ischemia impairs spatial working memory, but not spatial mapping. With L. Genova. Society for Neuroscience Convention, Anaheim, CA, October 30, 1992.
- Effects of conditioning factors on sensitization to the locomotor-stimulating actions of bromocriptine. With W. A. Carlezon, Jr. & R. A. Wise. Canadian College of Neuropharmacology, Montreal, Canada, May 30, 1993.
- MK-801 reduces the seizures, hippocampal cell loss, and spatial navigation deficit produced by electrical stimulation of the perforant pathway in rats. With K. L. Sanderson and C. A. Frye. Society for Neuroscience, Washington, D. C., November 10, 1993.

Associative factors in stress-induced sensitization to the behavioral activating effects of morphine. With Y. Shaham and J. Stewart. Society for Neuroscience, Washington, D. C., November 9, 1993.

Medial septal lesions enhance locomotor sensitization to amphetamine. With J. K. Grabarek. Society for Neuroscience, Miami Beach, November 16, 1994.

The 5HT1A agonist 8-OH-DPAT attenuates the effects of inescapable shocks on activity, fluid intake, and body weight in rats. With R. L. Bitner. Society for Neuroscience, San Diego, CA, November 20, 1995.

Acute corticosterone replacement three-months after adrenalectomy improves performance in a Morris water maze despite degeneration in the dentate gyrus. With C. M. McCormick, M. McNamara, & N. W. Kleckner. Society for Neuroscience, San Diego, CA, November 20, 1995.

Electrolytic lesions of the nucleus accumbens in rats enhance locomotor sensitization to 0.4 mg/kg nicotine. With E. P. Johnson. Society for Neuroscience, Washington, DC. November 17, 1996.

Failure of the antioxidant PBN to reduce the CA1 damage and enhanced locomotion produced by global ischemia. With S. B. Abelson. Society for Neuroscience, New Orleans, October 29, 1997.

Previous co-administration of MK-801 blocks the expression of locomotor sensitization to nicotine in rats? State dependency? With T. Beer. Society for Neuroscience, Los Angeles, CA, October 25-30, 1998.

Co-administration of MK-801 appears to block the development of locomotor sensitization to nicotine in rats. With T. Beer & A. J. Wagner. First Congress of the Behavioral Pharmacology Society and the European Behavioural Pharmacology Society, Boston, MA, September 1-4, 1999.

Undergraduate neuroscience at Bates College: A curriculum based on laboratory science. With N. W. Kleckner, C. M. McCormick, C. M., & T. Rioux. Society for Neuroscience, Miami Beach, October 23-28, 1999.

Spontaneously Hypertensive Rats (SHR): An animal model of impulsivity in ADHD? With G. S. Ganem. Society for Neuroscience, New Orleans, October, 2000.

Amygdala lesions enhance context-specific locomotor sensitization to nicotine in rats. With R. M. Guerriero. Society for Neuroscience, San Diego, November, 2001.

MK-801 enhances forelimb stepping in the unilateral 6-OHDA-lesioned rat. With N. W. Kleckner, S. Mague, & R. Pijanowski. Society for Neuroscience, San Diego, November, 2001.

The role of serotonin in PCP-induced behaviors in the hole board apparatus. With T. Moran, & J. Winterton. Society for Neuroscience, Orlando, November, 2002.

Electrolytic lesions of the n. accumbens core, but not shell, enhance context-specific locomotor sensitization to nicotine in rats. With L. P. Gerety. Society for Neuroscience, New Orleans, November, 2003.

## REFERENCES

Richard V. Wagner  
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