

Biographical Sketch: Jaak Panksepp, Dept. of Psychology, BGSU, Bowling Green, OH 43403

Jaak Panksepp is Distinguished Research Professor of Psychobiology, emeritus, at Bowling Green State University and Adjunct Professor of Psychiatry at the Medical College of Ohio at Toledo. He finished his graduate work at the University of Massachusetts in behavioral neuroscience (Ph.D., 1969) and then pursued postdoctoral work in feeding and nutrition at the University of Sussex in England and sleep physiology at the Worcester Foundation for Experimental Biology in Shrewsbury, Mass. His present research is devoted to the analysis of the neuroanatomical and neurochemical mechanisms of emotional behaviors (in the emerging field of *affective neuroscience*), with a focus on understanding how separation responses, social bonding, social play, fear, anticipatory processes, and drug craving are organized in the brain, especially with reference to psychiatric disorders. His past work in hypothalamic mechanisms of energy balance control was supported by a NIMH Research Scientist Development Award. He is author of over 300 scientific articles which deal with basic physiological mechanisms of motivated behavior. He is co-editor of the multivolume "Handbook of the Hypothalamus" and of "Emotions and Psychopathology." He has been an editor of a series in "Advances in Biological Psychiatry," and his text on *Affective Neuroscience: The Foundations of Human and Animal Emotions* (1998, Oxford University Press). His edited *Textbook of Biological Psychiatry*, is just about to appear (Wiley, 2004).

His general research orientation is that a detailed understanding of basic emotional systems at the neural level will highlight the basic sources of human values and the nature and genesis of emotional disorders in humans. He has helped develop the controversial opioid-antagonist therapy for autistic children based on his pre-clinical investigations into brain circuits which control social behaviors and is pursuing new therapies for the treatment of Attention Deficit/Hyperactivity Disorders (ADHD).

At the present time, Panksepp is among a handful of active investigators who is doing empirical work on the neurobiological nature of emotional processes. His empirical and theoretical work during the past decade have directly touched most of the known brain systems which elaborate the basic emotions. His interests and theoretical contributions will be summarized by noting the review-type papers that he has published during the past two decades (see attached references). Overall perspectives on brain organization of emotionality are summarized in citations 1-6. His contributions to our understanding of basic anticipatory/expectancy mechanisms of the brain which have implications for understanding schizophrenia, as summarized in citations 7-9. He has contributed to our understanding of basic social-emotional mechanisms in the

brain and is one of the founders of this field, as reviewed in citations **10-15**. He initiated work on our understanding of how play/joy processes are organized in the brain (as reviewed in citations **16-19**), and how separation anxiety/fear and other stress processes reflect neural organization (as reviewed in citations **20-23**). He has helped integrate our understanding of neurochemical coding of behavior, with a specific focus on basic psycho-behavioral operating systems of the brain in refs **24-26**. He has developed a new animal model of depression (ref **36**) and has helped translate some of the basic animal work into clinical practice (i.e., naltrexone treatment of autistic disorders, as summarized in refs **27-34**) and related psychiatric issues in ref. **35-40**. His earlier contributions to the field of energy balance regulation are summarized in citations **41-47**. In addition to his academic work, he founded and directed the non-profit Memorial Foundation for Lost Children which has provided free information and advice to parents concerning various childhood neuropsychiatric disorders, especially autism and ADHD.

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The following reviews are general contributions to the neuro-theoretical understanding of emotions

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