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I completed my PhD in Psychology at McGill University in 1977 and was a postdoctoral fellow at University of British Columbia until 1980, when I moved to Queen's. In research with animals, my students and I use rats to study the role played by various neurotransmitters, especially dopamine, in reward-related incentive learning. Results suggest that dopamine alters the ability of environmental stimuli associated with reward to elicit approach and other responses in the future. The underlying mechanism involves D1-like receptors and a number of kinases and phosphatases possibly changing glutamate synaptic effectiveness in the striatum. Techniques include: behavioural tests of unconditioned and conditioned locomotor activity, place conditioning, lever press and maze learning and memory tasks; systemic or central injections of pharmacological compounds; and histology. In research with human participants diagnosed with Parkinson's disease or schizophrenia we study the role of dopamine and the effects of antipsychotic drugs on cognitive abilities including non-declarative memory. These studies with humans complement those with animals in revealing the role played by various neurotransmitters in the control of behaviour.