Pavlovian conditioned freezing: practical tutorial

INSTRUCTOR RESUME

Dr. Anagnostaras is a leading authority on Pavlovian fear conditioning, and has been working with the paradigm for 17 years. He received his PhD at UCLA under the mentorship of Dr. Michael Fanselow, and did post-doctoral work with Dr. Alcino Silva. He is an Associate Professor at UCSD. The general aim of Dr. Anagnostaras' research is to combine the molecular-genetic, systems, and cognitive-behavioral levels to understand how the brain produces behavior and cognition. A major emphasis in this endeavor is bridging systems and molecular approaches using hippocampus-dependent learning, in particular, learning about context. The hippocampal-neocortical memory system offers an excellent opportunity in which the molecular and cognitive levels may be first plainly joined. Long-term objectives of Dr. Anagnostaras' research are to advance our understandings of the mechanisms of memory, cognition, and drug addiction.

Professor Stephan Anagnostaras, University of California San Diego, USA

BENEFITS OF THE TUTORIAL

Specific experimental paradigms used in the study of basic learning and memory pathways will be discussed, with special emphasis on the role of the amygdala, hippocampus, and neocortex in fear conditioning. Participants will learn specifics about instrumentation and experimental protocols that are employed by leading researchers in the field of fear conditioning.

FEATURES

Participants will be exposed to current leading theories pertaining to formation of fear-provoking memories. The use of experimental techniques to explore areas such as memory consolidation and phobia will be discussed. Experimental applications using the state-of-the-art digital video based fear conditioning system from Med Associates, Inc. will be the basis of the practical part of the workshop, but will be applicable to all who wish to enter the field.

AUDIENCE

This workshop is aimed at basic scientists who desire fundamental understanding of current theories in fear conditioning and the role of the hippocampus in memory consolidation, as well as practical applications of the paradigm. No prior knowledge of fear conditioning techniques, psychology, or neuroscience is assumed. There is no limit, other than room capacity, to the number of participants.