Understanding brain affective states by measuring animal grooming pattering

Allan V Kalueff and Justin L LaPorte

National Institute of Mental Health, NIMH, NIH, Bethesda, USA

The complex patterning of grooming in rodents, which proceeds in a cephalocaudal direction and involves several distinct stages, can be dissected into its constituent parts and microstructures. Grooming and its patterning have been shown to be sensitive to a number of stressors, making it an ideal target for manipulation in studies of experimental (animal) models of affective disorders like anxiety, depression or obsessive compulsive disorder. Discussed during the talk will be recent studies from this and other labs showing how the investigating of stressed (vs. non-stressed) or pharmacologically treated, as well as genetically different (anxious vs. non-anxious inbred strains; mutant vs. wild type) animals helps to understand brain affective states through measuring the disruption of grooming patterning and its regional distribution. Owing to the ever-increasing number of rodent models that have strong grooming phenotypes, this high-throughput in-depth analysis of grooming behavior is becoming promising for biomedical research on affective disorders.