
Social relationships contribute to both mental and physical wellbeing, and early social experiences can influence the quality of relationships throughout the life span. Studies in monogamous prairie voles have provided insights into the neural mechanisms of the formation and maintenance of social bonds, as well as the consequences of social loss. Oxytocin and vasopressin play important roles in several aspects of social cognition and behavior in animal models, including social recognition, maternal nurturing and social bonding. Oxytocin and vasopressin act in the nucleus accumbens and ventral pallidum, respectively, during pair bond formation to link the neural encoding of the social stimuli of the partner with the rewarding aspects of mating. Once bonded, loss of a partner results in activation of the stress axis and the development of depressive-like behavior. The social loss induced depression is mediated by corticotropin releasing factor (CRF), which suppresses oxytocin secretion in the nucleus accumbens. This CRF induced negative affect following separation from the partner may serve to maintain the social bond. There are remarkable parallels between these studies in voles and recent studies in humans which suggest that these mechanisms are highly conserved from rodent to man. In humans, intranasal delivery of oxytocin enhances eye gaze into the eyes of others, the ability to infer the emotions of others from facial cues, empathy, and socially reinforced learning. These results suggest that the oxytocin system may be a viable target for drugs to improve social functioning in autism.

Thursday, February 27, 2014 • 11:45 A.M.
Bowen Auditorium, McCreary 115
Lunch will be provided

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