Sex steroids and cognition in nonhuman primates

Agnes Lacreuse
University of Massachusetts, USA

Rodent studies have greatly advanced our understanding of the effects of sex steroids on the brain and cognition. Yet, significant differences between rodent and human endocrinology and cognition limit the translational impact of rodent findings. Studies in nonhuman primates (NHP) are useful to determine whether the mechanisms identified in rodents apply to primates and to help refine therapies that are optimal for human health. This presentation will review the current state of knowledge about the effects of estrogens and androgens on the brain and cognition in NHP across the adult lifespan. The data presented suggest that estrogens benefit several aspects of cognitive function in aged females, without having significant effect in young adult females. There is still a paucity of studies examining the effects of androgens on cognition in male NHP. Data from our lab suggest that testosterone influences emotion more than it does cognition in young and older males. The implications of the NHP findings for human hormonal replacement therapy will be discussed.

Biography

Agnes Lacreuse holds a PhD from Paul Sabatier University, Toulouse, France. After completing Postdoctoral studies at the University of Georgia, Athens, GA and Emory University, Atlanta GA, she became a research Assistant Professor at the Yerkes National Primate Research Center of Emory University. She joined the Faculty of the University of Massachusetts at Amherst in 2006, where she is currently an Associate Professor. Her studies in macaques and marmosets aim to understand how sex hormones affect cognition, emotion and brain function across the lifespan.

alacreuse@psych.umass.edu

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