Comparative and developmental neuroscience of social bonds

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Social bonds are crucial to psychological and physical well-being in most mammals. However, our understanding of their neurobiology comes from very few species, primarily rodents. In my laboratory we study socially monogamous species including prairie voles (Microtus ochrogaster) and titi monkeys (Plecturocebus cupreus), both of which display adult pair bonding and biparental care of offspring. We ask questions such as: how do early life social and hormonal experiences affect our lifelong ability to form social bonds, and the oxytocin and vasopressin systems underlying those bonds? How might human clinical manipulations of oxytocin (such as induction of labor, or use of intranasal oxytocin for children with autism) affect the lifelong ability to form social bonds, and the oxytocin and vasopressin systems underlying those bonds? What can a primate model of pair-bonding (the titi monkey) tell us about the neurobiology of social bonds in primates and humans? In this talk I will present findings from our research, in the context of the larger field of neuroscience and where I believe that field is going in the next twenty years.

Karen L. Bales received her B.A. from the University of New Orleans in 1993 and her Ph.D. from the University of Maryland in 2000 before continuing as a postdoctoral fellow at the University of Illinois, Chicago. Her research program focuses on the neurobiology of social behavior, and how human manipulations of the hormone oxytocin may affect the long-term ability to form social bonds. In addition, she studies the ways in which oxytocin and the closely related hormone arginine vasopressin subserve these social bonds. Dr. Bales works with two socially monogamous species, prairie voles (Microtus ochrogaster) and titi monkeys (Callicebus cupreus).