

Emotions, Brain Development, and the Role of Early Experiences

Nim Tottenham, PhD.

Keynote speech – plenary lecture

Saturday, 28 September 2019, 9:00 a.m. – 10:00 a.m.

The foundation of mature emotion regulation is comprised of connections between the amygdala and medial prefrontal cortex (mPFC). We have shown that this circuitry is slow to develop in humans, and age-related changes in this neurobiology underlie the maturation of affective behaviors. The current talk will present a series of behavioral and functional neuroimaging studies that characterize the development of this circuitry and begin to elucidate the mechanisms by which social environments modulate its development. The talk is dedicated to neural and behavioral findings in typical development and also to development following early caregiving adversity. Discussion will focus on possible sensitive periods of brain development and the role of the social environment in establishing the neural architecture that supports emotional behaviors in maturity.

Nim Tottenham, PhD. (USA)

Nim Tottenham is a Professor of Psychology at Columbia University in New York and Director of the Developmental Affective Neuroscience Laboratory. She is interested in the developing brain and the powerful role of early experiences, such as sensitive caregiving and early childhood adversity and stress on brain development and functioning.

The research of the Developmental Affective Neuroscience Lab focuses on the development of neural circuits that underlie affective behaviors across childhood and adolescence, with a particular emphasis on limbic-cortical connections (e.g., amygdala-medial prefrontal cortex).

The Lab's major focus is to characterize normative human brain development. Professor Tottenham and her colleagues at her Lab use behavioral, physiological, and functional MRI methods with the aim of identifying sensitive periods during which the environment has the largest influence on neural phenotypes.

Nim Tottenham has authored over 80 journal articles and book chapters. She is a frequent lecturer both nationally and internationally on human brain and emotional development. She is a Fellow of the Association for Psychological Science and is a recipient of the National Institute of Mental Health Biobehavioral Research Awards for Innovative New Scientists (BRAINS) Award, the American Psychological Association's Distinguished Scientific Award for Early Career Contribution to Psychology, and the Developmental Science Early Career Researcher Prize.

