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“Adolescent cognitive development in a non-human primate model”

Abstract:

Cognitive abilities such as working memory continue to improve through adolescence into adulthood, in parallel with structural and functional brain changes, including in the prefrontal cortex. Non-human primate studies also indicate a protracted development of the prefrontal cortex, similar to that of humans. In a series of studies we have investigated changes in behavioral cognitive performance of macaque monkeys during adolescence and the underlying structural brain changes associated with them, obtained through imaging means. Furthermore, we investigated changes in neural activity, obtained with neurophysiological recordings from the prefrontal cortex, as these changes were taking place. Our results reveal the neural substrates that ultimately mediate cognitive maturation in adolescence.