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NEUROANATOMY OF HIGH ORDER COGNITIVE PROCESSING FOLLOWING VERY PRETERM BIRTH

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Avariety of impairments in high order cognitive processing have been described throughout childhood and adolescence in individuals who were born very preterm (<32 weeks of gestation), although little is known about the effects of very preterm birth on specific cognitive outcomes later in life. Existing research in very preterm samples suggests a selective long-term vulnerability of brain circuits associated with different aspects of high order cognitive processing, including the fronto-temporal, the fronto-striatal and the fronto-parieto-cerebellar networks. This talk will describe a few studies from our group that have directly explored the functional and structural brain correlates of high order cognitive outcomes in very preterm born young adults, with an emphasis on emotion recognition, learning and working memory. The effects of early brain damage and structural alterations following very preterm birth on the adult neuroanatomy of cognitive processing will be also discussed.

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