Early Developmental Studies of Autism Spectrum Disorder

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Autism spectrum disorder (ASD) is a lifelong neurodevelopmental disorder that is typically diagnosed by 3 years of age. Despite the early age of clinical diagnosis, relatively few neuroimaging studies have focused on evaluating the neural basis of ASD in very young infants and children. The identification of imaging markers that precede clinical diagnosis could have profound impact in identifying infants at risk for ASD and initiating early interventions. Evaluating young children, at the time when ASD symptomatology emerges provides more direct evidence of the underlying neural basis of ASD because it precedes the onset of intensive behavioral interventions, which presumably alter brain structure and connectivity. This workshop brings together researchers from around the globe working on several large-scale studies aimed at evaluating neural development spanning the fetal period through the age of clinical diagnosis.

Applying MRI to Map Typical and Potentially Atypical Brain Development at Foetal, Neonatal and Infant Time-points
Grainne McAlonan, King's College London, London, United Kingdom

Atypical Early Brain Development in Infants at High Risk for Autism: Findings from the Infant Brain Imaging Study (IBIS)
Martin Styner, University of North Carolina at Chapel Hill, Chapel Hill, NC, United States

Examining the Potential of Eye-tracking and EEG to Quantify Trajectories of Early Development in Children with Autism Spectrum Disorder
Marie Schaer, University of Geneva, Geneva, Switzerland

Identifying Neural Phenotypes of Autism Spectrum Disorder: The Autism Phenome Project
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