

4<sup>th</sup> International Conference and Exhibition on

# Probiotics, Functional and Baby Foods

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### Will probiotics benefit brain development during the first 1000 days?

The acquisition of intestinal micro-biota after birth has a defining impact on the development and function of immune and metabolic systems integral to health and homeostasis. During first 1000 days of life, the gut micro-biota of infants quickly becomes remarkably diverse and rich. Interestingly, the neurodevelopmental window is paralleled with the major shifts in the infant micro-biota. Disruptions in evolving gut micro-biota during this critical period can impact postnatal brain development. Probiotics are believed to balance gut micro-biota and benefit the host's health. They have been found to relieve mental disorders, possibly through lowering levels of pro-inflammatory cytokines in the host and decreasing stress-induced corticosterone production, whilst concurrently increasing bacterial metabolites such as tryptophan. It has been recently suggested that probiotic supplementation during the first six months of life may reduce the risk of development of neuropsychiatric disorders in later life. There is increasing evidence that probiotics contribute to brain development and especially during the first 1000 days of life. However, the mechanisms how probiotics benefit brain development still need further investigation.

### Biography

Shugui Wang has completed her PhD at National University of Singapore. She worked as a Post-doctoral Researcher at Genome Institute of Singapore working closely with Martin Hibberd. Her research focus was on gut micro-biota in relation to host's health and infection. Thereafter at the National Cancer Centre Singapore, she continued her research passion with Sven Pettersson on gut-brain axis focusing on gut micro-biota and brain functions. She is currently working at Danone Nutricia Research.

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