Helene Fachim
Salford Royal Foundation Trust

Winner of the BAP Poster Prize

I have started working in the neuroscience field during my first graduation in Biological Sciences (2002-2006, Alfenas-MG, Brazil). My academic career was dedicated to psychobiology, both master (2006-2009, USP, Ribeirao Preto-SP-Brazil) and PhD (2009-2013, USP, Ribeirao Preto-SP-Brazil) I have been working with animal models in the investigation of new natural compounds (derived from spider's venoms) with neuroprotective activity. Since 2013, when I started my first post-doc position at Sheffield Hallam University, I've been working in the investigation of epigenetic mechanisms involved in schizophrenia and its animal models under supervision of Prof. Reynolds. Using a pyrosequecing method we analysed the DNA methylation changes in parvalbumin (PV) in equivalent promoter gene regions in human and rats, that were published afterwards. I went back to Brazil and been granted from FAPESP (Fundacao de Amparo a Pesquisa do Estado de Sao Paulo) to work in the group of Prof. Cristina Marta Del-Ben, where I could apply the techniques I've learned in the UK. As part of my main project, I've been granted from the same agency to spend one year at Sheffield Hallam University and this opportunity enabled us to investigate if the same changes we found before in PV would be also present in blood samples of patients in first episode of psychosis and in rats under isolation rearing. The epigenetic investigation in schizophrenia was extended for other genes, among them the Brain neurotrophic derived factor (BDNF), which we found to be altered in both first episode of psychosis and in the brain of rats under isolation rearing. The important finding was that the methylation changes was not only altered in psychosis but also had a relation with childhood trauma. These results were presented at the BAP and support the evidence that early-life stress may influence the development of mental disorders, including schizophrenia.