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Day 2- 26.6, Session III- 10:45-12:45

Can we influence resilience? Lessons from translational research

Abstract:
Identifying biomarkers in the immediate aftermath of trauma exposure might be used clinically as predictors of subsequent outcomes and could inform treatment approaches.
Prior studies have suggested that reduced levels of cortisol might predict later PTSD, but studies to date have not evaluated epigenetic markers associated with endocrine function in the immediate aftermath of trauma.
We explored whether cytosine methylation of the 1F promotor of the NR3C1 gene and associated plasma (cortisol levels) obtained in the immediate aftermath of trauma exposure could predict PTSD.
Blood samples were taken at the ED and later from which NR3C1-1F promoter methylation in peripheral blood mononuclear cells.
The PTSD group had a significantly lower percentage of methylated clones in the NR3C1-1F promoter across the 39 cytosine-phosphate-guanine (CpG) sites at the ED as compared to the non-PTSD group.

These findings suggest that lower methylation of the NR3C1-1F promotor may be a pre-traumatic predictor of PTSD.