CLSA Approved Project

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Project Title
Mental and physical health associations in large biological datasets: using developmental neuroscience to inform risk and resilience to chronic disease

Project Summary
Early life environment exposure is the foundation of a healthy life-course trajectory. Exposure to environmental variations can impair the development of brain structures and increase the risk of diseases later in life. In contrast, exposure to supportive interventions is effective in promoting health. There is considerable inter-individual variability in the development of psychopathology, however, the mechanisms involved in the responsiveness to the environment are unknown. This project investigates functional gene networks associated with individual differences to environmental influences and their influence on risk for psychopathology and metabolic diseases, as suggested by differentially expressed genes. Our hypothesis is that there is a common mechanism involved in responsiveness to environmental extremes, making individuals more susceptible to supportive and unsupportive environments.

Keywords
early life adversity, differential susceptibility, translational neuroscience, chronic disease