DEPRESSION AND EARLY LIFE ADVERSITY AS RISK FACTORS FOR AUTOIMMUNE DISEASES, SEVERE INFECTIONS AND CANCER

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The social-environment has a critical impact on health. The proposed progress is by stimulation of downstream pathways, from the central nervous system to the periphery, which subsequently alters the cells' gene expression and transcription, particularly affecting the immune system. Stressors such as childhood adversity and mental health problems have both separately, and together, been identified as having crucial impact on inflammatory and immune genes. We intend to investigate how depression alone, and depression in combination with childhood adversity, as markers of adverse life events, alter the immune system towards dysregulation and increases the risk of developing immune-related pathologies such as autoimmune, cardiovascular and neurodegenerative diseases. We hypothesize that depression has negative modulating effect on the immune system and thus increases the risk of autoimmune disease, severe infection and cancer. Childhood adversity sensitizes the immune system (i.e. forms a pipeline) to develop pathological dysregulations when subsequently exposed to stressors later in life. Furthermore, we predict a dose-response relationship between the gravity and number of stressors and the risk of dysregulation. This study links two nationwide population-based registers namely the Danish Psychiatric Central Register and the National Hospital Register to create a longitudinal cohort study. Rate ratios, and accompanying 95% confidence intervals will be obtained. Accordingly, this work yields additional knowledge to how the social-environment, specifically adverse life events, affects the risk of immune-related diseases. Thus this can improve understandings on the interplay of mental disorders and immune-related diseases, and subsequently establish fundament for future research and possibilities for treatment and prevention.