WTDTP Projects for September 2023

Project Reference: T3/49

Project Title: **Social inequality in child mental health difficulties – understanding epigenetic and family pathways**

Theme(s): Theme 3: Genetically informed causal inference and risk prediction

Primary Supervisor: Dr Patrycja Piotrowska (University of Leicester) [p.piotrowska@leicester.ac.uk](mailto:p.piotrowska@leicester.ac.uk)

Secondary Supervisor(s): Prof Frank Dudbridge (University of Leicester)

Department: School of Psychology and Vision Sciences

Project Summary: Increasing levels of child and young people’s mental health difficulties remain at the forefront of the public health agenda. Understanding the key risk factors and causal mechanisms is an important step in addressing these. Clear social gradients exist with the children from low socio-economic (SES) backgrounds generally being at higher risk for socio-emotional and behavioural problems with previously suggested mechanisms involving increased levels of stress, poorer parental mental health, or less stimulating environments. This project will integrate these processes including potential epigenetic markers to further our understanding of the mechanisms that underlie social inequality in child mental health. Using large-scale longitudinal dataset and advanced statistical modelling, this project will examine the associations between socio-economic risk and DNA methylation and potentially underlying mechanisms, and explore mediation models that incorporate multiple stress and epigenetic processes linking social inequality to mental health difficulties. This interdisciplinary research will draw on child psychopathology and lifecourse approaches while incorporating epigenetic data into longitudinal models.