



FORUM

Adversity's Legacy: From Molecular Pathways to Mental Health Outcomes Across the Lifespan

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Abstract

Our experiences, particularly early in life, exert a profound influence on our vulnerability and resistance to stressors. The mother often plays a key role in shaping how her offspring respond to stress, both behaviorally and physiologically, during their development. Accumulating evidence indicates that epigenetic modifications, which modify the function of genes without altering the inherited genetic blueprint, are associated with individual differences in the response to adversity. In this talk, I will share findings from my lab that investigate how stress experienced by mothers can leave a lasting imprint on their offspring, affecting how they respond to stress throughout their lives. We are examining this from various angles: studying stressors during pregnancy, how maternal care interacts with other factors in the environment and genetics, and how the mother's diet can influence the offspring's brain development and behavior. Using rodent and human studies, this research investigates the biological mechanisms and potential markers that predict stress responses, emphasizing the importance of the maternal environment in brain development and stress susceptibility.