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## **The effect of resource scarcity early in life on the rat basolateral amygdala transcriptome**

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Early life adversity (ELA) can increase risk for the development of disorders, including substance use disorder. However, stress that is not overwhelming can have an “inoculating” effect promoting resilience later in life. To understand how ELA impacts the basolateral amygdala (BLA), we used a rodent model of ELA called the limited bedding and nesting model (LBN), mimicking a low resource environment by restricting access to nesting materials during the first week of life. We discovered LBN produces a resilient-like phenotype against addiction-related behaviors. LBN reduces impulsive choice in male rats, a behavior partly mediated by the BLA. We also discovered LBN reduces morphine self-administration in male rats suggesting that LBN produces an inoculating effect in males. We sought to delineate possible molecular underpinnings that promote stress-induced resilience. RNAseq was conducted to delineate the effect LBN had on the transcriptional profile of the BLA. We used rank-rank hypergeometric overlap analysis to compare overall gene expression pattern in males and females induced by LBN. Many genes were upregulated by LBN in males and downregulated in females. We narrowed our analysis to genes showing a significant difference between control and LBN and found 209 DEGs in females and 149 DEGs in males. These gene expression changes were predominantly sex specific as only 11 genes demonstrate overlap. Heatmaps organized by fold change of LBN DEGs displayed different patterns of upregulated and downregulated genes in males and females. These analyses highlight unique patterns of gene expression LBN induces within the BLA in a sex-specific manner.