Antidepressant use, infection during pregnancy linked to neurodevelopmental disorders

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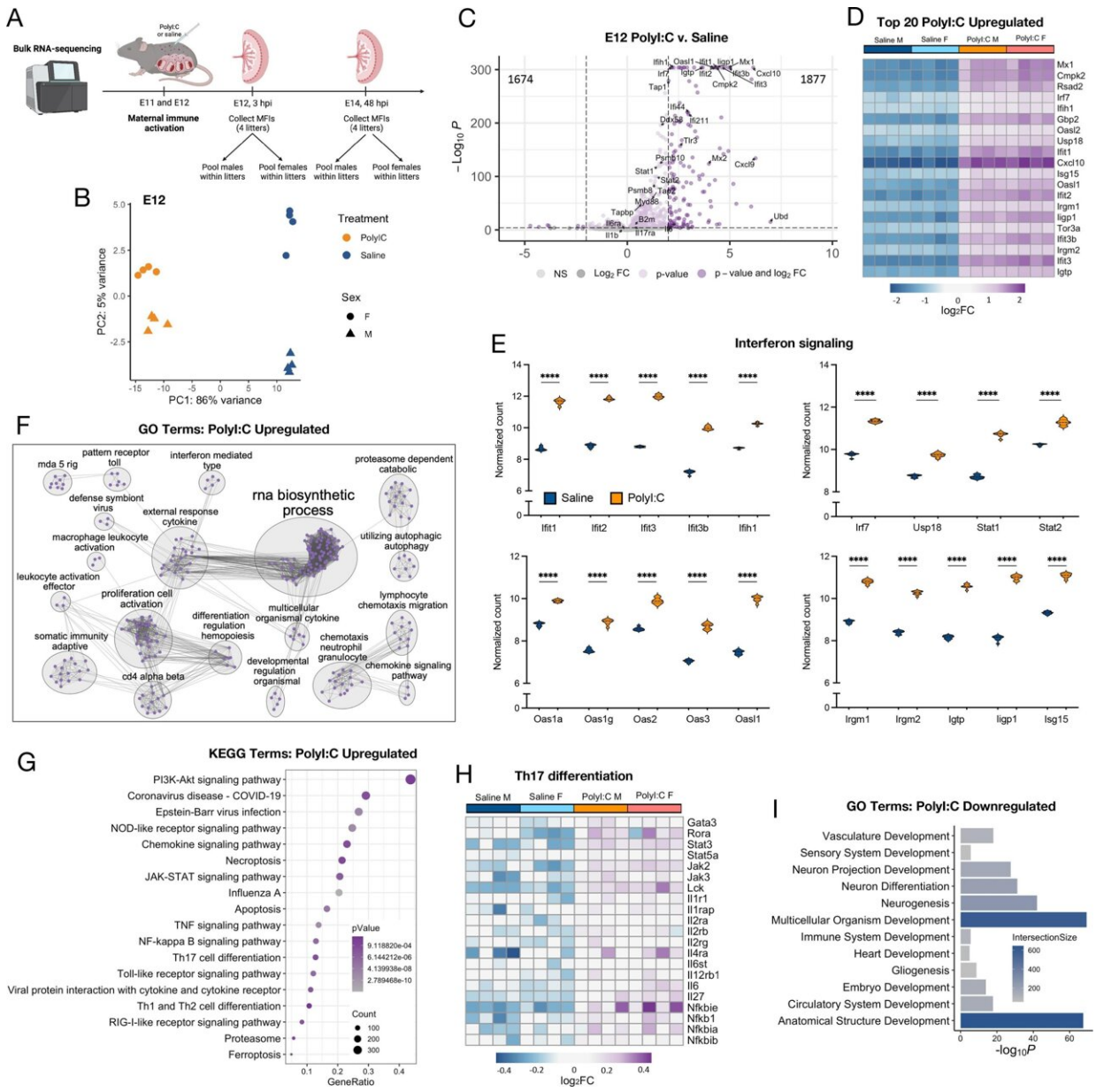

The maternal-fetal interface undergoes a robust immune response acutely after polyI:C exposure. Pregnant dams were injected intraperitoneally (i.p.) with 20 mg/kg polyI:C on embryonic day (E)11 and E12 to elicit maternal immune activation (MIA) or with saline as a control. Bulk RNA-sequencing was conducted on maternal-fetal interface (MFI) tissue at E12 (3 hrs post-injection, hpi) and E14 (48 hpi). (A) Experimental design. 3- and 48-hpi placental tissue and fetal bodies were collected. Fetal bodies were genotyped by Sx PCR to demarcate placental extracts by sex. Sex-stratified samples were pooled within litters for E12 and E14 timepoints, n = 4 litters/group. (B-G) RNA was isolated from MFI tissue then bulk RNA-sequencing was conducted on the 4 experimental groups with 4 samples per group. (B) Principal component analysis (PCA) showing clustering of groups from E12 placental samples. (C) Volcano plot showing the number of differentially expressed genes in E12 MFI tissue comparing polyI:C to saline (FDR