**Supplemental Material**

Data-driven discovery of mid-pregnancy immune markers associated with maternal lifetime stress: results from an urban pre-birth cohort

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| Supplemental Table 1. Results (percent change, 95% confidence interval) from sensitivity analyses regressing log2-transformed Life Stressor Checklist-Revised scores on log2-immune markers adjusting for a series of medical and lifestyle factors. | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Marker | Main model | Infection | Diabetes | Hypertensive disorder | Atopy | Steroid medication | Overweight/  obese | Cigarette smoking |
| Model N | 110 | 88 | 88 | 88 | 107 | 110 | 106 | 109 |
| Cases | ---- | N=39 (44%) | N=4 (4.5%) | N=19 (22%) | N=50 (47%) | N=14 (13%) | N=67 (63%) | N=16 (15%) |
| CCL11 | 0.20  (-0.17, 0.58) | 0.21  (-0.39, 0.44) | 0.02  (-0.40, 0.43) | 0.01  (-0.40, 0.42) | 0.21  (-0.16, 0.57) | 0.20  (-0.17, 0.57) | 0.17  (-0.18, 0.51) | 0.23  (-0.14, 0.61) |
| CCL23 | -0.28  (-0.70, 0.15) | -0.39  (-0.86, 0.09) | -0.36  (-0.82, 0.10) | -0.33  (-0.79, 0.13) | -0.30  (-0.72, 0.13) | -0.29  (-0.72, 0.13) | -0.29  (-0.69, 0.10) | -0.25  (-0.68, 0.18) |
| CD244 | 0.16  (-0.57, 0.89) | 0.21  (-0.58, 1.00) | 0.17  (-0.61, 0.95) | 0.14  (-0.64, 0.92) | 0.23  (-0.48, 0.94) | 0.16  (-0.56, 0.89) | 0.14  (-0.53, 0.81) | 0.12  (-0.61, 0.85) |
| CST5 | 0.34  (-0.20, 0.87) | 0.37  (-0.22, 0.95) | 0.37  (-0.22, 0.96) | 0.36  (-0.22, 0.94) | 0.40  (-0.13, 0.92) | 0.37  (-0.17, 0.91) | 0.58  (0.07, 1.09) | 0.12  (-0.61, 0.85) |
| CX3CL1 | 0.75  (0.19, 1.28) | 0.59  (-0.11, 1.28) | 0.60  (-0.10, 1.30) | 0.60  (-0.09, 1.30) | 0.67  (0.14, 1.20) | 0.75  (0.21, 1.29) | 0.59  (0.07, 1.11) | 0.68  (0.14, 1.23) |
| CXCL1 | -0.25  (-0.71, 0.22) | -0.35  (-0.89, 0.19) | -0.37  (-0.91, 0.16) | -0.28  (-0.86, 0.30) | -0.27  (-0.73, 0.18) | -0.27  (-0.73, 0.20) | -0.23  (-0.66, 0.20) | -0.22  (-0.69, 0.25) |
| CXCL10 | -0.21  (-0.51, 0.10) | -0.12  (-0.46, 0.23) | -0.10  (-0.45, 0.24) | -0.10  (-0.43, 0.24) | -0.21  (-0.51, 0.09) | -0.21  (-0.51, 0.10) | -0.21  (-0.49, 0.08) | -0.20  (-0.51, 0.10) |
| CXCL5 | 0.04  (-0.31, 0.40) | 0.16  (-0.25, 0.57) | 0.18  (-0.23, 0.59) | 0.11  (-0.33, 0.55) | 0.04  (-0.32, 0.40) | 0.03  (-0.33, 0.38) | -0.09  (-0.42, 0.25) | 0.03  (-0.33, 0.39) |
| FGF23 | -0.05  (-0.29, 0.19) | 0.09  (-0.23, 0.40) | 0.08  (-0.24, 0.40) | 0.09  (-0.22, 0.41) | -0.06  (-0.30, 0.17) | -0.05  (-0.29, 0.19) | -0.16  (-0.39, 0.07) | -0.06  (-0.30, 0.18) |
| IL17C | -0.54  (-1.13, 0.04) | -0.74  (-1.59, 0.11) | -0.72  (-1.57, 0.13) | -0.73  (-1.58, 0.12) | -0.46  (-1.03, 0.12) | -0.53  (-1.11, 0.05) | -0.51  (-1.05, 0.03) | -0.54  (-0.12, 0.05) |
| IL10 | 0.16  (-0.25, 0.56) | 0.14  (-0.29, 0.56) | 0.11  (-0.30, 0.53) | 0.10  (-0.31, 0.51) | 0.10  (-0.30, 0.54) | 0.13  (-0.27, 0.54) | 0.26  (-0.12, 0.63) | 0.17  (-0.23, 0.58) |
| IL5 | -0.15  (-0.38, 0.09) | -0.17  (-0.42, 0.08) | -0.17  (-0.42, 0.08) | -0.19  (-0.44, 0.06) | -0.14  (-0.36, 0.09) | -0.15  (-0.38, 0.08) | -0.11  (-0.32, 0.11) | -0.13  (-0.37, 0.10) |
| IL7 | 0.09  (-0.34, 0.52) | 0.27  (-0.24, 0.78) | 0.28  (-0.24, 0.80) | 0.26  (-0.25, 0.77) | 0.12  (-0.30, 0.54) | 0.10  (-0.33, 0.53) | 0.18  (-0.22, 0.57) | 0.05  (-0.39, 0.48) |
| MCP2 | -0.19  (-0.57, 0.19) | -0.13  (-0.52, 0.27) | -0.16  (-0.55, 0.24) | -0.18  (-0.59, 0.22) | -0.23  (-0.60, 0.15) | -0.21  (-0.59, 0.17) | -0.16  (-0.51, 0.20) | -0.15  (-0.54, 0.23) |
| MMP1 | 0.04  (-0.33, 0.41) | -0.08  (-0.51, 0.35) | -0.08  (-0.51, 0.35) | -0.10  (-0.54, 0.33) | 0.10  (-0.26, 0.46) | 0.06  (-0.32, 0.43) | 0.03  (-0.31, 0.37) | 0.04  (-0.33, 0.41) |
| SLAMF1 | 0.23  (-0.24, 0.70) | 0.30  (-0.26, 0.87) | 0.30  (-0.29, 0.89) | 0.26  (-0.32, 0.84) | 0.20  (-0.26, 0.66) | 0.23  (-0.24, 0.70) | 0.14  (-0.29, 0.57) | 0.27  (-0.21, 0.74) |
| ST1A1 | -0.09  (-0.35, 0.18) | 0.03  (-0.27, 0.33) | 0.03  (-0.28, 0.33) | 0.02  (-0.28, 0.31) | -0.06  (-0.32, 0.20) | -0.06  (-0.33, 0.21) | -0.04  (-0.29, 0.21) | -0.09  (-0.36, 0.18) |
| TNFβ | 0.10  (-0.61, 0.81) | 0.24  (-0.56, 1.03) | 0.24  (-0.56, 1.04) | 0.25  (-0.55, 1.05) | -0.01  (-0.71, 0.69) | 0.11  (-0.60, 0.81) | 0.19  (-0.47, 0.85) | 0.09  (-0.62, 0.80) |
| TWEAK | -0.12  (-0.90, 0.65) | 0.09  (-0.75, 0.94) | 0.06  (-0.80, 0.92) | 0.18  (-0.70, 1.06) | 0.01  (-0.75, 0.77) | -0.13  (-0.90, 0.65) | -0.18  (-0.90, 0.53) | -0.15  (-0.93, 0.64) |
| All models are adjusted for maternal age at delivery and week of serum collection. Each column additionally adjusts for the variable indicated by the column heading. A description of how each variable was derived is available on the following page. Beta coefficients are interpreted in terms of percent change per 1% increase in immune marker levels. | | | | | | | | |

Definition and derivation of variables adjusted for in Supplemental Table 1:

* Infection: pneumonia, urinary tract infection, sexually transmitted disease or other infections during pregnancy as determined by review of electronic medical records (EMRs)
* Diabetes: Type 2 or gestational diabetes during pregnancy as determined by EMRs.
* Hypertensive disorder: chronic hypertension, gestational hypertension or pre-eclampsia as determined by EMRs.
* Atopy: active asthma, eczema, or allergic dermatitis during pregnancy based on maternally reported diagnosis, symptoms, and medication use.
* Steroid medications: use of steroid (inhaled, topical, nasal, oral) or other asthma medication during pregnancy as determined by EMRs and maternal self-report.
* Overweight/obese: maternal pre-pregnancy body mass index (BMI) greater than 24 kg/m2. BMI was calculated based on maternal self-reported pre-pregnancy height and weight.
* Cigarette smoking: determined by maternal self-report at enrollment and during the third trimester.