## Supplemental Methods

### Neonatal filter extraction

The neonatal dried blood spots were collected on filter paper by 72 hours and stored at 20°C for an extended but similar period of time (10 years approximately) prior to the analysis so the degree of degradation was comparable across all sample types [Heuer et al., in submission]. They were maintained by the Genetic Disease Screening Program, California Department of Public Health, then they were received on dry ice in 96-well plates as 3x3mm punches per subject in single wells of the plate, and stored at -80°C until elution. The day prior to assaying for cytokines/chemokines, each sample received 200µl of elution buffer (.5% BSA in 50ml PBS with 1 tablet of Roche Complete Protease Inhibitor Cocktail; Roche Applied Science, Indianapolis, IN) and was placed on a plate shaker overnight at 4°C. The following morning eluates were isolated from the filter paper spots and a small 4µl aliquot used for BCA assay (Thermo Scientific, Rockford, IL) determination of total protein to normalize cytokine/chemokine levels against blood sample quantity variation. Immediately following overnight elution, neonatal levels of peripheral blood immune markers were determined using a commercially available, slightly modified, Luminex multiplex magnetic bead assay as described in Methods.

### Validity of the multiplex extraction for maternal and neonatal immune mediators

Rigorous assay validation including linearity of dilution (around 98% - 99%), recovery, sensitivity and specificity were reported in the panel sheets (see neonatal assay details at http://www.bio-rad.com/webroot/web/pdf/lsr/literature/Bulletin_6499.pdf and maternal assay details at http://www.filgen.jp/Product/Bioscience19-Bioplex/HCYTOMAG-60K.MPX.pdf). Also, reference samples were used on each plate to ensure assay consistency.