

Appendix 3. Top 10 Upregulated Gene Transcripts in Second Trimester Amniotic Fluid

| Symbol | Gene Name | Gene Function | Tissue Specificity* | Fold Change | Benjamini-Hochberg <i>P</i> |
|----------------|---|--|--|-------------|-----------------------------|
| <i>RBP2</i> | retinol binding protein 2, cellular | Intracellular transport of retinol | NA | 1215.2 | < 1 x 10 ⁻¹⁵ |
| <i>APOC3</i> | apolipoprotein C-III | Apolipoprotein C-III is a very low density lipoprotein (VLDL) protein. APOC3 inhibits lipoprotein lipase and hepatic lipase; it is thought to delay catabolism of triglyceride-rich particles. | Liver > 30 MoM | 754.7 | < 1 x 10 ⁻¹⁵ |
| <i>FABP1</i> | fatty acid binding protein 1, liver | This gene encodes the fatty acid binding protein found in liver. FABP's roles include fatty acid uptake, transport, and metabolism | Fetal liver, adult colon, small intestine > 10 MoM | 653.6 | < 1 x 10 ⁻¹⁵ |
| <i>APOA2</i> | apolipoprotein A-II | This gene encodes apolipoprotein A-II, which is the second most abundant protein of the high density lipoprotein particles. | Fetal liver, adult liver > 30 MoM | 461.0 | < 1 x 10 ⁻¹⁵ |
| <i>ANXA13</i> | annexin A13 | Annexins play a role in the regulation of cellular growth and in signal transduction pathways. This gene is associated with undifferentiated, proliferating endothelial cells and differentiated villus enterocytes. | Small intestine > 10 MoM | 411.9 | < 8.12 x 10 ⁻¹⁰ |
| <i>SULT2A1</i> | sulfotransferase family, cytosolic, 2A, dehydroepiandrosterone preferring, member 1 | Catalyzes the sulfation of steroids and bile acids in the liver and adrenal glands | Adrenal gland > 10 MoM | 354.5 | < 1 x 10 ⁻¹⁵ |
| <i>CDHR5</i> | cadherin-related family member 5 | Acts as a calcium-dependent cell adhesion protein | Liver > 30 MoM | 304.8 | < 1 x 10 ⁻¹⁵ |

Hui L, Wick HC, Edlow AG, Cowan JM, Bianchi DJW. Global gene expression analysis of term amniotic fluid cell-free fetal RNA. *Obstet Gynecol* 2013;121.

The authors provided this information as a supplement to their article.

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|--------------|------------------------------------|---|--|-------|-----------------------|
| <i>DABI</i> | disabled homolog 1 (Drosophila) | Adapter molecule functioning in neural development | Not organ specific | 298.2 | 1.0×10^{-4} |
| <i>MUC13</i> | mucin 13, cell surface associated | Epithelial and hemopoietic transmembrane mucin that may play a role in cell signaling | Pancreas, small intestine > 10 MoM | 237.0 | $< 1 \times 10^{-15}$ |
| <i>APOC2</i> | apolipoprotein C-II | Component of the very low density lipoprotein fraction in plasma; activator of several triacylglycerol lipases. | Adult liver > 30 MoM; fetal liver > 10 MoM | 206.3 | $< 1 \times 10^{-15}$ |

MoM, multiples of the median; NA, not applicable.

Gene functions obtained from public databases (UniProtKB available at www.uniprot.org and Entrez Gene available at www.ncbi.nlm.nih.gov/gene). The information has been modified from the source due to space limitations.

*Tissue specificity as mapped in the BioGPS gene expression atlas (<http://biogps.gnf.org>).