## Pulmonary Exposure to Particles during Pregnancy Causes Increased Neonatal Asthma Susceptibility

Alexey V. Fedulov<sup>1</sup>, Adriana Leme<sup>1</sup>, Zhiping Yang<sup>1</sup>, Morten Dahl<sup>1</sup>, Robert Lim<sup>1</sup>, Thomas J. Mariani<sup>2</sup>, and Lester Kobzik<sup>1</sup>

<sup>1</sup>Molecular and Integrative Physiological Sciences Program, Department of Environmental Health, Harvard School of Public Health; and <sup>2</sup>Lung Biology Center, Brigham and Women's Hospital, Harvard Medical School, Boston, Massachusetts

Online Data Supplement A

## Figure Legends.

**Figure EA.** Significance Analysis for Microarrays (SAM). SAM was performed across all 16 samples in order to identify genes significantly different in groups Norm PBS, Norm TiO2, Preg PBS and Preg TiO2.

## **Figure EB.** Hierarchical clustering post ANOVA.

Left: Hierarchical clustering was performed for genes significantly different in the group Preg TiO2 vs Preg PBS, with subtraction of genes significantly different in Norm TiO2 vs Norm PBS and of genes significantly different in all Preg vs all Norm. Right: Similarly hierarchical clustering was performed for genes significantly different in the group Norm TiO2 vs Norm PBS with exclusion of those genes significantly different in Preg TiO2 vs Preg PBS as well as of genes significantly changed by pregnancy. Comparison of profiles illustrates differential gene expression patterns in these two comparisons.

## Figure EA. SAM result.

```
Normappellical
Normap
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             immunoglobul in kappa chain variable 20 (U20) /// immunoglobul in kappa chain variable 0 (U0)-16 complement component 2 immunoglobul in kappa chain variable 20 (U20) /// immunoglobul in kappa chain variable 0 (U0)-16 immunoglobul in kappa chain variable 0 (U0)-16 immergin alpha 0 matrix metallopspeldase 2 matrix metallopspeldase 3 matrix metallopspeldase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Earnyl peptide receptor, related sequence 2"
guantine desainase
pleckterin
"nuclear receptor subfamily 4, group A, member 1"
immunoglobulin joining chain
"nuclear receptor subfamily 4, group A, member 1"
immunoglobulin joining chain
"coapulation factor XIII, Al subunie"
"TWO protein typosine kinase binding protein 5
midoglin
"TWO protein typosine kinase binding protein
"For protein typosine kinase binding protein
"coapulation coapulation to the subunie"
"coapulation protein 2
stockhoad box 3
stockhoad box 3
stockhoad box 3
stockhoad box 4
settin 1

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    paired-Ig-like receptor A2
6 protein-coupled receptor 146
docking protein 2
docking protein 2
6arther-Rasheed feline sarcoma viral (Fgr) oncogene homolog
haculoviral IM repeat-containing 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "C-type lettin domain family 4, member e"
contactin 4
RIEHH cDHM 211002501 gene
hypothetical protein 5330167206
hypothetical protein 5330167206
pannine demained 6002 gene
gmainine demained 6002 gene
gmainine demained 6002
gene
sinterleukin 1 alpha
signal-regulatory protein beta 1 /// similar to SIBP beta 1 isoform 1
"RAST-related GFR, member AZ" /// similar to MAST-related GFR, member AZ"
"C-type lettin domain family 4, member AZ"
```

Figure EB. ANOVA clustering

