**Supplementary File 1. Pathway analysis for genes downregulated by SMES only in EC\_cluster0**

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| **Gene Name** | **Gene Functional Annotation** | **Q.value** |
| Aif1 | Cellular response to hydroperoxide | 0.016051416 |
| Macrophage activation | 0.017010456 |
| Inflammatory response | 0.017251057 |
| Positive regulation of monocyte chemotaxis | 0.022879878 |
| Cellular response to extracellular stimulus | 0.027332483 |
| Response to electrical stimulus | 0.035567045 |
| Positive regulation of nitric oxide biosynthetic process | 0.037014415 |
| Cellular response to hormone stimulus | 0.038907022 |
| Actin filament bundle assembly | 0.039704501 |
| Positive regulation of T cell proliferation | 0.047704487 |
| Phagocytic cup | 0.027332483 |
| Pycard | Positive regulation of chemokine production | 0.00223187 |
| Positive regulation of interleukin-6 production | 0.009187487 |
| Positive regulation of interleukin-10 production | 0.015064383 |
| Cellular response to lipopolysaccharide | 0.015295529 |
| Regulation of tumor necrosis factor-mediated signaling pathway | 0.015295529 |
| Positive regulation of cysteine-type endopeptidase activity | 0.015295529 |
| Interleukin-1 beta production | 0.016051416 |
| Macropinocytosis | 0.016051416 |
| Inflammatory response | 0.017251057 |
| Negative regulation of interferon-beta production | 0.017251057 |
| Activation of cysteine-type endopeptidase activity | 0.017251057 |
| Positive regulation of interleukin-8 production | 0.017251057 |
| Positive regulation of T cell activation | 0.022879878 |
| Positive regulation of activated T cell proliferation | 0.024146921 |
| Positive regulation of interleukin-1 beta production | 0.028164725 |
| Positive regulation of interleukin-6 production | 0.02896625 |
| Negative regulation of canonical NF-kappab signal transduction | 0.03839198 |
| Positive regulation of type II interferon production | 0.040489387 |
| Tumor necrosis factor-mediated signaling pathway | 0.041261961 |
| Regulation of inflammatory response | 0.047014148 |
| Positive regulation of tumor necrosis factor production | 0.047704487 |
| Positive regulation of cysteine-type endopeptidase activity involved in apoptotic process | 0.047704487 |
| Cytosol | 0.034959432 |
| NLRP1 inflammasome complex | 0.014691841 |
| AIM2 inflammasome complex | 0.015295529 |
| NLRP3 inflammasome complex | 0.016051416 |
| Ikappab kinase complex | 0.017143782 |
| Interleukin-6 receptor binding | 0.016051416 |
| BMP receptor binding | 0.016051416 |
| Cysteine-type endopeptidase activity involved in apoptotic process | 0.017251057 |
| Il33 | Positive regulation of chemokine production | 0.00223187 |
| Positive regulation of interleukin-6 production | 0.009187487 |
| Microglial cell proliferation | 0.014691841 |
| Microglial cell activation involved in immune response | 0.014691841 |
| Positive regulation of interleukin-13 production | 0.016051416 |
| Positive regulation of interleukin-5 production | 0.016051416 |
| Macrophage activation involved in immune response | 0.017251057 |
| Positive regulation of interleukin-4 production | 0.019540379 |
| Positive regulation of macrophage activation | 0.020702823 |
| Negative regulation of type II interferon production | 0.025130843 |
| Positive regulation of cytokine production | 0.027332483 |
| Positive regulation of inflammatory response | 0.047704487 |
| Cytosol | 0.034959432 |
| Transport vesicle | 0.045940999 |
| Ltc4s | Cellular response to lipopolysaccharide | 0.015295529 |
| Leukotriene biosynthetic process | 0.016051416 |
| Leukotriene metabolic process | 0.017010456 |
| Response to lipopolysaccharide | 0.017143782 |
| Nuclear outer membrane | 0.019540379 |
| Leukotriene-C4 synthase activity | 0.015295529 |
| Glutathione binding | 0.020702823 |
| Glutathione peroxidase activity | 0.026074999 |
| Glutathione transferase activity | 0.037860086 |