

Supplemental Table 4. Direct vs. Interaction Cocultures, Significant Molecular Functions by Ingenuity Pathway Analysis

Molecular Functions	Black Cell Denotes Significance (p<0.05) ^a			Benjamini-Hochberg P-Value ^b		
	Direct	Interaction Epithelial	Interaction Fibroblast	Direct	Interaction Epithelial	Interaction Fibroblast
Antigen Presentation				7.02E-03- 4.07E-02	4.6E-02- 9.74E-02	9.69E-02- 9.69E-02
Carbohydrate Metabolism				4.57E-02- 5.59E-02	2.17E-02- 1.07E-01	9.69E-02- 9.69E-02
Cell Cycle				3.81E-03- 7.58E-02	6.24E-02- 9.74E-02	9.42E-03- 1.27E-01
Cell Death				3.42E-05- 7.58E-02	4.52E-02- 1.07E-01	8.28E-02- 1.42E-01
Cell Morphology				7.15E-05- 7.58E-02	6.24E-02- 1.07E-01	5.77E-02- 1.13E-01
Cell Signaling				2.13E-02- 7.58E-02	6.24E-02- 1.07E-01	3.73E-03- 1.13E-01
Cell-To-Cell Signaling and Interaction				1.08E-07- 7.58E-02	1.66E-03- 1.07E-01	8.28E-02- 9.69E-02
Cellular Assembly and Organization				2.93E-02- 7.58E-02	6.24E-02- 1.07E-01	3.24E-02- 1.27E-01
Cellular Compromise				1.81E-02- 7.58E-02	4.6E-02- 1.07E-01	3.96E-02- 1.13E-01
Cellular Development				2.91E-04- 7.58E-02	6.24E-02- 1.07E-01	8.28E-02- 1.38E-01
Cellular Function and Maintenance				6.66E-02- 7.58E-02	4.6E-02- 1.07E-01	8.28E-02- 1.27E-01
Cellular Growth and Proliferation				5.75E-08- 7.58E-02	6.24E-02- 1.07E-01	5.15E-02- 1.28E-01
Cellular Movement				2.96E-09- 7.58E-02	4.6E-02- 1.07E-01	5.15E-02- 1.27E-01
DNA Replication, Recombination, and Repair				--	6.24E-02- 1.07E-01	9.42E-03- 1.27E-01
Drug Metabolism				7.69E-03- 4.07E-02	6.24E-02- 1.07E-01	8.28E-02- 8.28E-02
Free Radical Scavenging				4.13E-02- 4.13E-02	6.24E-02- 1.07E-01	--
Gene Expression				9.29E-03- 7.58E-02	6.24E-02- 1.07E-01	8.28E-02- 1.27E-01
Lipid Metabolism				2.12E-03- 7.58E-02	2.17E-02- 1.07E-01	8.28E-02- 1.33E-01
Molecular Transport				1.12E-02- 7.58E-02	2.17E-02- 1.07E-01	3.73E-03- 1.27E-01
Nucleic Acid Metabolism				--	6.24E-02- 8.47E-02	3.24E-02- 1.13E-01
Small Molecule Biochemistry				2.12E-03- 7.58E-02	2.17E-02- 1.07E-01	3.73E-03- 1.33E-01
Vitamin and Mineral Metabolism				2.13E-02- 7.58E-02	6.24E-02- 9.74E-02	8.28E-02- 1.27E-01

^aP-value represents Benjamini-Hochberg corrected p-value from Ingenuity Pathway Analysis^bWhere no p-value is reported (--) no genes for this pathway were present for that coculture type