

Table S2: Top IPA pathways affected by 1 or 0.1 ppm benzene exposure

Benzene exposure levels	1 ppm	0.1 ppm
Disease and disorders		
Cancer	134	32
Organismal Injury and Abnormalities	136	32
Gastrointestinal Disease	122	30
Endocrine System Disorders	121	
Reproductive System Disorders	111	
Inflammatory Response		8
Renal and Urological Disease		6
Molecular and cellular function		
Cellular Movement	38	13
Small Molecule Biochemistry	43	8
Cell Morphology	15	
Cellular Assembly and Organization	8	
Lipid Metabolism	36	
Cell Cycle		10
Cell-to-Cell Signaling and Interaction		10
Cellular Growth and Proliferation		10
Physiological system development		
Hematological System Development and Function	18	
Immune Cell Trafficking	17	
Tissue Morphology	25	
Organismal Survival	43	
Connective Tissue Development and Function	11	
Reproductive System Development and Function		6
Nervous System Development and Function		10
Cardiovascular System Development and Function		7
Embryonic Development		10
Organismal Development		12

Table S3: Estimated Z-score of biological process following 1 ppm benzene exposure

Biological process	Z-score
Nervous System Development and Function	
Cognition	-2.4
Learning	-2.2
Memory	-2.0
Gastrointestinal Disease	
Hepatic steatosis	-2.0
Organismal Development	
Size of body	2.0
Infectious Diseases	
Infection by RNA virus	2.5
Canonical Pathways	
Phagosome Formation	1.4
Insulin Secretion Signaling Pathway	1.3
LXR/RXR Activation	1.0