

**Table S1. Disease as well as Molecular and Cellular Functions associated with different genes selected in different conditions.**

Data1

**a. Disease as well as Molecular and Cellular Functions associated with the differentially expressed genes between Low, High arsenic exposure and sex.**

Disease

Name	p-value range	# Molecules
Cancer	3.75E-04 - 6.75E-18	419
Organismal Injury and Abnormalities	3.75E-04 - 6.75E-18	423
Endocrine System Disorders	2.29E-04 - 4.68E-10	334
Hematological Disease	3.44E-04 - 1.18E-09	130
Immunological Disease	3.50E-04 - 1.18E-09	172

Molecular and Cellular Functions

Name	p-value range	# Molecules
Cell Death and Survival	3.55E-04 - 9.52E-11	170
Cellular Function and Maintenance	2.88E-04 - 6.50E-10	145
Cell Morphology	3.75E-04 - 6.96E-08	45
Cell Cycle	3.61E-04 - 8.45E-08	59
Cell-To-Cell Signaling and Interaction	3.75E-04 - 1.95E-07	91

**b. Disease as well as Molecular and Cellular Functions associated with the differentially expressed genes between Low vs High arsenic exposure**

Disease

Name	p-value range	# Molecules
Cancer	1.10E-02 - 1.76E-14	211
Organismal Injury and Abnormalities	1.10E-02 - 1.76E-14	212
Gastrointestinal Disease	9.50E-03 - 5.81E-10	187
Endocrine System Disorders	9.95E-03 - 4.22E-07	168
Reproductive System Disease	1.10E-02 - 2.39E-06	132

Molecular and Cellular Functions

Name	p-value range	# Molecules
Protein Synthesis	1.01E-02 - 5.07E-05	43
Cell-To-Cell Signaling and Interaction	1.11E-02 - 6.81E-05	41
Cellular Assembly and Organization	9.50E-03 - 6.81E-05	25
Lipid Metabolism	9.88E-03 - 1.75E-04	11
Molecular Transport	9.88E-03 - 1.75E-04	48

**c. Disease as well as Molecular and Cellular Functions associated with the differentially expressed genes between males and females**

Disease

Name	p-value range	# Molecules
Connective Tissue Disorders	1.25E-05 - 1.66E-14	91
Immunological Disease	1.38E-05 - 1.66E-14	192
Inflammatory Disease	5.56E-06 - 1.66E-14	114

Organismal Injury and Abnormalities	1.43E-05 - 1.66E-14	453
Skeletal and Muscular Disorders	1.25E-05 - 1.66E-14	108

#### Molecular and Cellular Functions

Name	p-value range	# Molecules
Cell Death and Survival	1.28E-05 - 1.52E-12	185
Cellular Function and Maintenance	1.50E-05 - 6.78E-12	117
Cell-To-Cell Signaling and Interaction	1.48E-05 - 1.14E-11	108
Cellular Movement	1.48E-05 - 1.50E-10	145
Cellular Development	1.39E-05 - 2.07E-10	160

#### Data2

**d. Disease as well as Molecular and Cellular Functions associated with the differentially expressed genes between Low, Medium, High arsenic exposure and sex**

#### Disease

Name	p-value range	# Molecules
Inflammatory Response	1.21E-03 - 4.26E-12	110
Organismal Injury and Abnormalities	1.12E-03 - 4.26E-12	264
Gastrointestinal Disease	1.05E-03 - 1.22E-11	231
Connective Tissue Disorders	1.06E-03 - 4.29E-11	67
Inflammatory Disease	9.88E-04 - 4.29E-11	89

#### Molecular and Cellular Functions

Name	p-value range	# Molecules
Cellular Movement	1.21E-03 - 9.89E-14	103
Cellular Compromise	8.98E-04 - 2.50E-09	36
Cell Death and Survival	1.14E-03 - 5.97E-09	105
Cell-To-Cell Signaling and Interaction	9.90E-04 - 1.02E-08	62
Cell Morphology	1.21E-03 - 1.21E-07	31

**e. Disease as well as Molecular and Cellular Functions associated with the differentially expressed genes between Low Medium High arsenic exposure**

#### Disease

Name	p-value range	# Molecules
Organismal Injury and Abnormalities	4.32E-03 - 2.64E-10	269
Respiratory Disease	3.74E-03 - 2.64E-10	88
Infectious Diseases	3.09E-03 - 2.81E-10	37
Gastrointestinal Disease	4.09E-03 - 3.05E-10	153
Inflammatory Disease	3.09E-03 - 6.54E-10	70

#### Molecular and Cellular Functions

Name	p-value range	# Molecules
Cellular Movement	4.20E-03 - 2.37E-07	87
Cellular Compromise	3.09E-03 - 5.69E-07	31
Cellular Development	4.32E-03 - 4.72E-06	64
Cellular Growth and Proliferation	4.21E-03 - 4.72E-06	73

Cell Cycle	4.09E-03 - 7.14E-06	55
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**f. Disease as well as Molecular and Cellular Functions associated with the differentially expressed genes between males and females**

**Disease**

Name	p-value range	# Molecules
Inflammatory Response	1.80E-04 - 7.99E-19	132
Organismal Injury and Abnormalities	1.85E-04 - 7.99E-19	259
Dermatological Diseases and Conditions	1.16E-04 - 3.82E-15	184
Immunological Disease	1.16E-04 - 3.82E-15	122
Inflammatory Disease	1.43E-04 - 3.42E-14	107

**Molecular and Cellular Functions**

Name	p-value range	# Molecules
Cell-To-Cell Signaling and Interaction	1.89E-04 - 1.60E-17	92
Cellular Movement	1.85E-04 - 2.92E-17	109
Cellular Compromise	1.42E-04 - 5.07E-12	39
Cellular Development	1.77E-04 - 3.11E-10	104
Cellular Growth and Proliferation	1.77E-04 - 3.11E-10	107

**g. Disease as well as Molecular and Cellular Functions associated with the differentially expressed genes between Low High arsenic exposure**

**Disease**

Name	p-value range	# Molecules
Cancer	4.35E-03 - 8.38E-11	340
Organismal Injury and Abnormalities	4.35E-03 - 8.38E-11	350
Inflammatory Response	4.35E-03 - 3.53E-10	113
Gastrointestinal Disease	4.35E-03 - 8.47E-09	296
Connective Tissue Disorders	3.48E-03 - 4.07E-08	79

**Molecular and Cellular Functions**

Name	p-value range	# Molecules
Cellular Compromise	2.49E-03 - 3.53E-10	37
Cellular Movement	4.14E-03 - 6.37E-09	110
Lipid Metabolism	4.14E-03 - 3.96E-06	36
Small Molecule Biochemistry	4.14E-03 - 3.96E-06	38
Cell-To-Cell Signaling and Interaction	3.90E-03 - 4.48E-06	61

**h. Disease as well as Molecular and Cellular Functions associated with the differentially expressed genes between Low Medium arsenic exposure**

**Disease**

Name	p-value range	# Molecules
Cancer	1.25E-03 - 3.50E-13	367
Organismal Injury and Abnormalities	1.25E-03 - 3.50E-13	374
Gastrointestinal Disease	1.25E-03 - 2.83E-10	323
Respiratory Disease	8.84E-04 - 3.16E-09	116

Infectious Diseases	7.56E-04 - 5.66E-09	45
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#### Molecular and Cellular Functions

Name	p-value range	# Molecules
Cell-To-Cell Signaling and Interaction	8.98E-04 - 1.26E-08	72
Cellular Movement	1.23E-03 - 1.90E-08	113
Cellular Compromise	2.97E-04 - 1.12E-07	38
Cellular Development	1.13E-03 - 2.45E-07	110
Cellular Growth and Proliferation	1.13E-03 - 2.45E-07	117

#### i. Disease as well as Molecular and Cellular Functions associated with the differentially expressed genes between Medium High arsenic exposure

##### Disease

Name	p-value range	# Molecules
Connective Tissue Disorders	2.40E-02 - 8.01E-06	27
Inflammatory Disease	2.40E-02 - 8.01E-06	32
Organismal Injury and Abnormalities	2.64E-02 - 8.01E-06	83
Skeletal and Muscular Disorders	2.40E-02 - 8.01E-06	27
Infectious Diseases	2.56E-02 - 1.87E-05	20

#### Molecular and Cellular Functions

Name	p-value range	# Molecules
Cell Morphology	2.56E-02 - 5.50E-05	20
Cellular Compromise	2.56E-02 - 5.50E-05	13
Gene Expression	2.56E-02 - 5.50E-05	13
Cellular Movement	2.56E-02 - 1.82E-04	21
Carbohydrate Metabolism	2.56E-02 - 9.86E-04	4