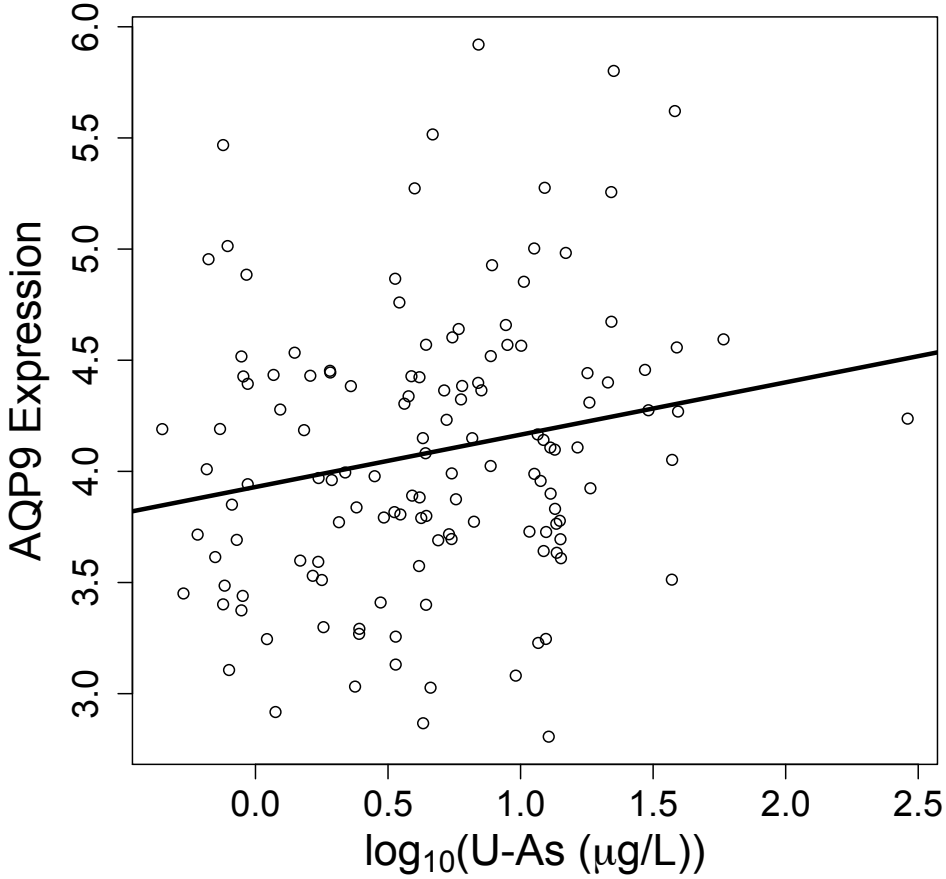
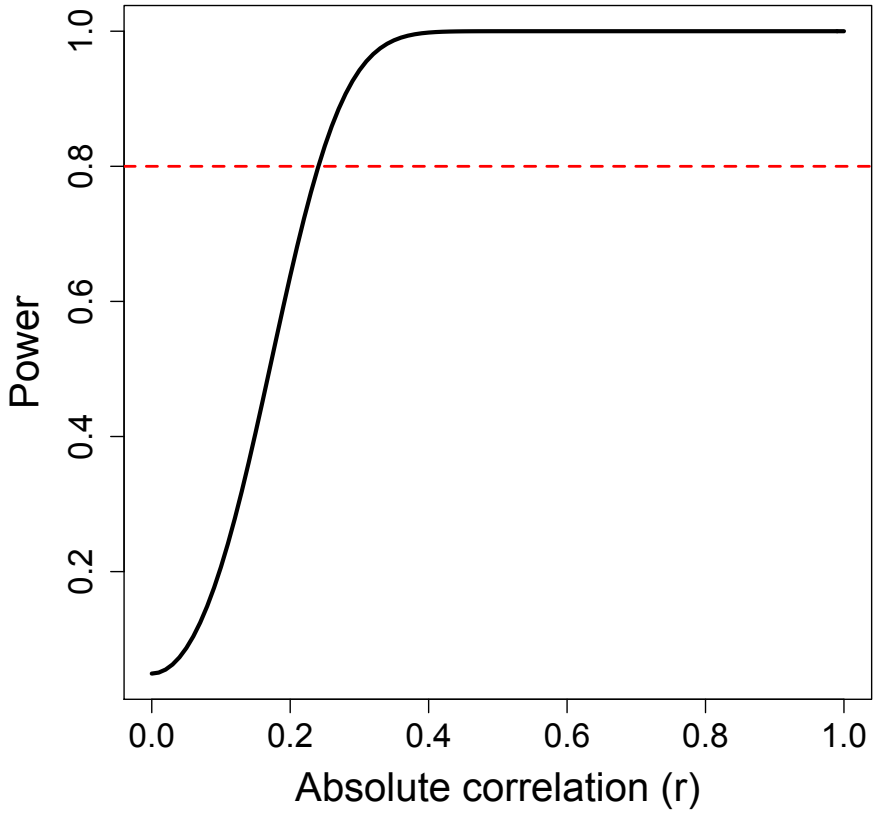
Supplemental Figure S1



Scattered plot view of the association between U-As and the placental expression of *AQP9*.

Supplemental Figure S2



Sample size power analysis. Plot of power as a function of Pearson correlation (r), assuming the study sample size (n = 133) and a statistical significance threshold of 0.05. Red dotted line denotes 80% power.

Supplemental Table S1. Associations between maternal urinary arsenic concentrations during pregnancy (U-As) and the expression of placental genes.

	U-As[a]	
Gene Expression	Coefficient Estimate	95% CI
AKR1C3	-0.16	(-0.33, 0.0)
ENPP2	-0.06	(-0.18, 0.06)
HMOX1	0.04	(-0.05, 0.14)
LEP	-0.20	(-0.70, 0.30)
NFE2L2	-0.04	(-0.14 ,0.05)
TYMS	0.02	(-0.09, 0.13)
AS3MT	-0.04	(-0.15, 0.07)
AQP9	0.25	(0.05, 0.45)
SLC39A2	-0.07	(-0.20, 0.07)

[a]Adjusted for maternal age.

Supplemental Table S2. Associations between maternal urinary arsenic concentrations during pregnancy (U-As) and the expression of placental genes after further adjustment of urinary creatinine levels in a subset of participants (n =91).

	U-As[a]	
Gene Expression	Coefficient Estimate	95% CI
AKR1C3	-0.17	(-0.43, 0.09)
ENPP2	-0.15	(-0.33, 0.02)
HMOX1	0.08	(-0.06, 0.22)
LEP	-0.38	(-1.13, 0.38)
NFE2L2	-0.16	(-0.31, -0.02)
TYMS	0.00	(-0.17, 0.17)
AS3MT	-0.14	(-0.29, 0.02)
AQP9	0.43	(0.14, 0.71)
SLC39A2	-0.07	(-0.28, 0.14)

[a]Adjusted for maternal age and urinary creatinine levels.

Supplemental Table S3. The association between maternal toenail arsenic and other metals in a subset of participants (n = 88).

Metals	Pearson correlation	p-value
Al	0.20	0.0629
V	0.34	0.0013
Cr	0.01	0.9550
Mn	0.34	0.0012
Fe	0.19	0.0815
Ni	-0.20	0.0563
Cu	-0.15	0.1581
Zn	0.03	0.7842
Se	-0.17	0.1100
Mo	0.20	0.0594
Cd	0.16	0.1316
Sn	0.18	0.1023
Sb	0.13	0.2336
Hg	0.05	0.6746
Pb	0.09	0.4167
U	0.28	0.0081

Supplemental Table S4. The association between maternal urinary arsenic concentrations during pregnancy (U-As) and AQP9 expression with or without adjustment of maternal toenail Mn levels in a subset of participants (n = 88).

	Without Mn adjustment		With Mn adjustment	
Gene Expression	Coefficient Estimate	95% CI	Coefficient Estimate	95% CI
AQP9	0.18	(-0.08, 0.43)	0.18	(-0.07, 0.44)

Supplemental Table S5. Associations between the placental expression of *AQP9* and that of other genes.

	AQP9[a]	
Gene Expression	Coefficient Estimate	95% CI
AKR1C3	-0.25	(-0.39, -0.12)
ENPP2	-0.13	(-0.22, -0.02)
HMOX1	0.07	(-0.01, 0.15)
LEP	0.44	(0.02, 0.86)
NFE2L2	-0.14	(-0.22, -0.06)
TYMS	-0.18	(-0.27, -0.09)
AS3MT	-0.05	(-0.14, 0.05)
SLC39A2	0.00	(-0.12, 0.11)

[a]Adjusted for maternal age.

Supplemental Table S6. Associations between placental gene expression and infant birth weight.

	Birth Weight (kg)[a]	
Gene Expression	Coefficient Estimate	95% CI
AKR1C3	0.00	(-0.14, 0.14)
ENPP2	0.28	(0.09, 0.47)
HMOX1	-0.06	(-0.31, 0.19)
LEP	-0.04	(-0.08, 0.01)
NFE2L2	-0.02	(-0.26, 0.21)
TYMS	0.03	(-0.18, 0.24)
AS3MT	0.10	(-0.12, 0.32)
AQP9	-0.02	(-0.13, 0.10)
SLC39A2	0.07	(-0.10, 0.25)

[a]Adjusted for maternal age and gestational age.