toxics

MDPI

Supplementary Materials: Utilizing a Population-Genetic Framework to Test for Gene-Environment Interactions between Zebrafish Behavior and Chemical Exposure

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Table S1. Results from fitting LMM to Control data

Random effect variances | Control group		
Group	***Variance***	*Standard Deviation*
Genes	1.506e+08 (σ^2_{Gene})	12270.70
Family ID	1.661e+02 (σ^2_{Family})	12.89
Residual	1.348e+07 (σ^2_E)	3671.80
Random effect parameter estimates | Control group		
Group	*Estimate*	
Genes (β_1)	3.34	
Family ID (β_2)	0.0035	
Error (ϵ)	3671.80	
Fixed effect parameter estimates | Control group		
Group	*Estimate*	*Standard Error*
Intercept	553.92	84.65

Table S2. Results from fitting LMM to Medium exposure group (16.4 uM PFHxA).

Random effect variances | Medium group		
Group	***Variance***	*Standard Deviation*
Genes	1.743e+08 (σ^2_{Gene})	13202.70
Family ID	3.063e+02 (σ^2_{Family})	17.50
Residual	1.809e+07 (σ^2_E)	4252.80
Random effect parameter estimates | Medium group		
Group	*Estimate*	
Genes (β_1)	3.10	
Family ID (β_2)	0.0041	
Error (ϵ)	4252.8	
Fixed effect parameter estimates | Medium group		
Group	*Estimate*	*Standard Error*
Intercept	564.44	91.24

Table S3. Results from fitting LMM to High exposure group (74.8 uM PFHxA).

Random effect variances | High group		
Group	***Variance***	*Standard Deviation*
Genes	1.849e+08 (σ^2_{Gene})	13596.95
Family ID	2.479e+00 (σ^2_{Family})	1.57
Residual	1.159e+07 (σ^2_E)	3404.12
Random effect parameter estimates | High group		
Group	*Estimate*	

Genes (β_1)	3.99	
Family ID (β_2)	0.00046	
Error (ϵ)	3404.12	
Fixed effect parameter estimates | High group		
Group	*Estimate*	*Standard Error*
Intercept	565.09	93.47