

**Chronic dietary selenomethionine exposure induces oxidative stress,
dopaminergic dysfunction, and cognitive impairment in adult zebrafish
(*Danio rerio*)**

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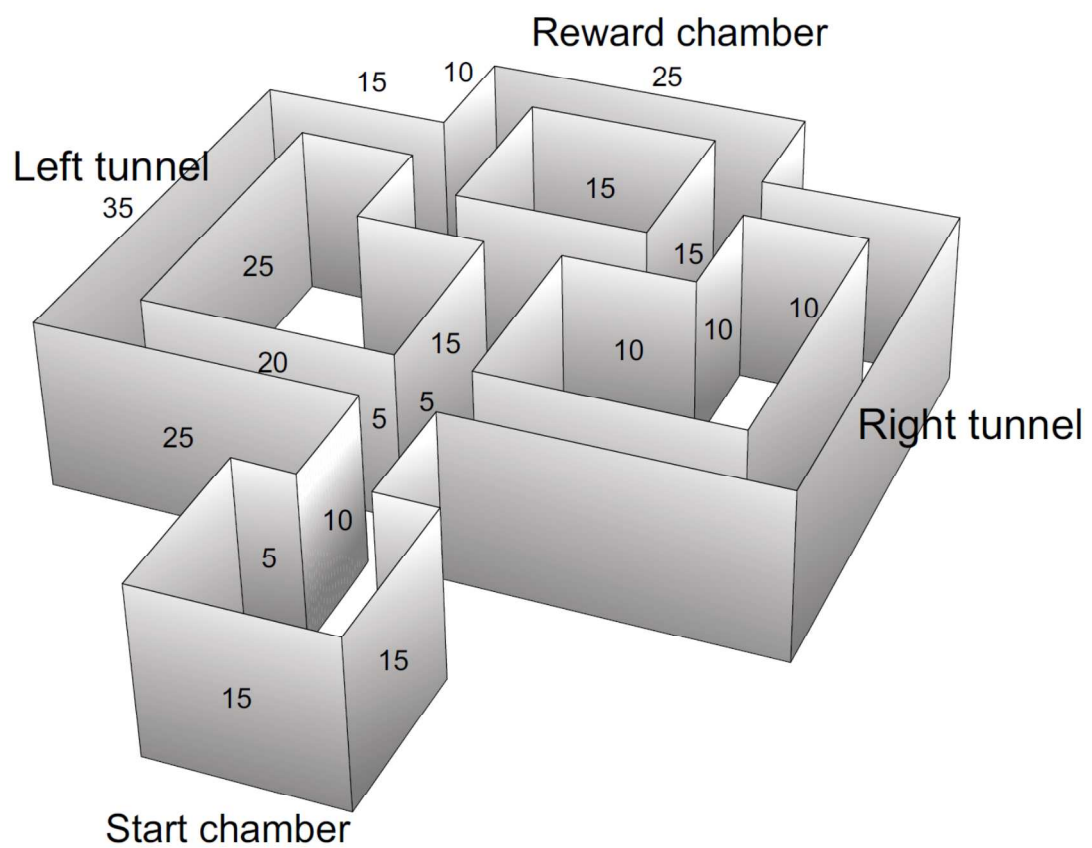


Figure S1. Schematic drawing of the latent learning apparatus used in this study. The numbers indicate the dimensions of the maze in cm.

Table S1. Primer sequences for quantitative PCR used in this study.

Target Gene	sense (5'–3')	antisense (5'–3')	GenBank accession no.
DRD1	ACTGCATGGTTCCTTTTGC	GGATTTGTGCTGTCCGTTTT	NM_001135976
DRD2b	GTCCTGAACGTGACAGAAGAG	CTCACCAACAACCTCCAGATAG	AY333791
DRD2c	ATGCTCCTGACTCTCCTC	ATCTGCCACCGCCAAG	AY333792
DRD3	TTCAGACCACCACCAACTACC	GCTCCGCCGACCACTTC	NM_183067.1
DRD4a	GACCGTATGTGATGGACTGATG	CGAACAGACGGAGGAGTAGATA	AY750152.1
DRD4b	GAGCTCTGGTCGTAACCGCTCACA	ACAGGCAGCACCTTCATTGCCTTG	AY750153.1
TH	ATCAGGATCACCCAGGATTTAC	CCAAGAGATGCCAAACCAATAC	NM_131149.1
SCL6A3	ACTTTCTGCTGTCCGTCATC	GCTCCTCCGCCATTCTTG	NM_131755
MAO	GCAGTCAGAGCCCGAATC	CACACCCATAAACTTGAGGAATC	NM_212827
BDNF	AGAGCGGACGAATATCGCAG	GTTGGAACCTTACTGTCCAGTCG	NM_131595
EGR-1	GTGAGCCCAACCCCATCTAT	CCAGGCTGATCTCACTTTGC	NM_131248
β-Actin	AGGTCATCACCATTGGCAAT	GATGTCCACGTCGCACTTCAT	AF057040

Table S2. Total Se concentrations in water (µg/l), food (µg/g dry weight), and fish (µg/g wet weight), cumulative percentages of mortality, and total number of dead fish in each treatment after 30 days of exposure to SeMet.

Nominal concentrations of Se in diet (µg/g)	Water (µg/l)	Food (µg/g dry weight)	Whole body (µg/g wet weight)	Cumulative % mortality	Number of dead fish (out of 56)
Control	0.48±0.10	0.97±0.10	0.96±0.14	5.35±3.41	3
3	0.47±0.05	2.36±0.21	0.98±0.10	0	0
10	0.82±0.07	9.73±0.09 ^a	4.21±0.28 ^a	7.14±4.12	4
30	1.23±0.06 ^a	32.56±2.44 ^a	12.94±0.66 ^a	21.42±2.91 ^b	12
60	2.07±0.12 ^a	57.55±3.20 ^a	25.52±0.91 ^a	35.71±5.83 ^b	20

^a Significantly different from control group at p<0.05. n=3 for total Se concentrations per treatment. ^b Significantly different from the control group at p<0.017.

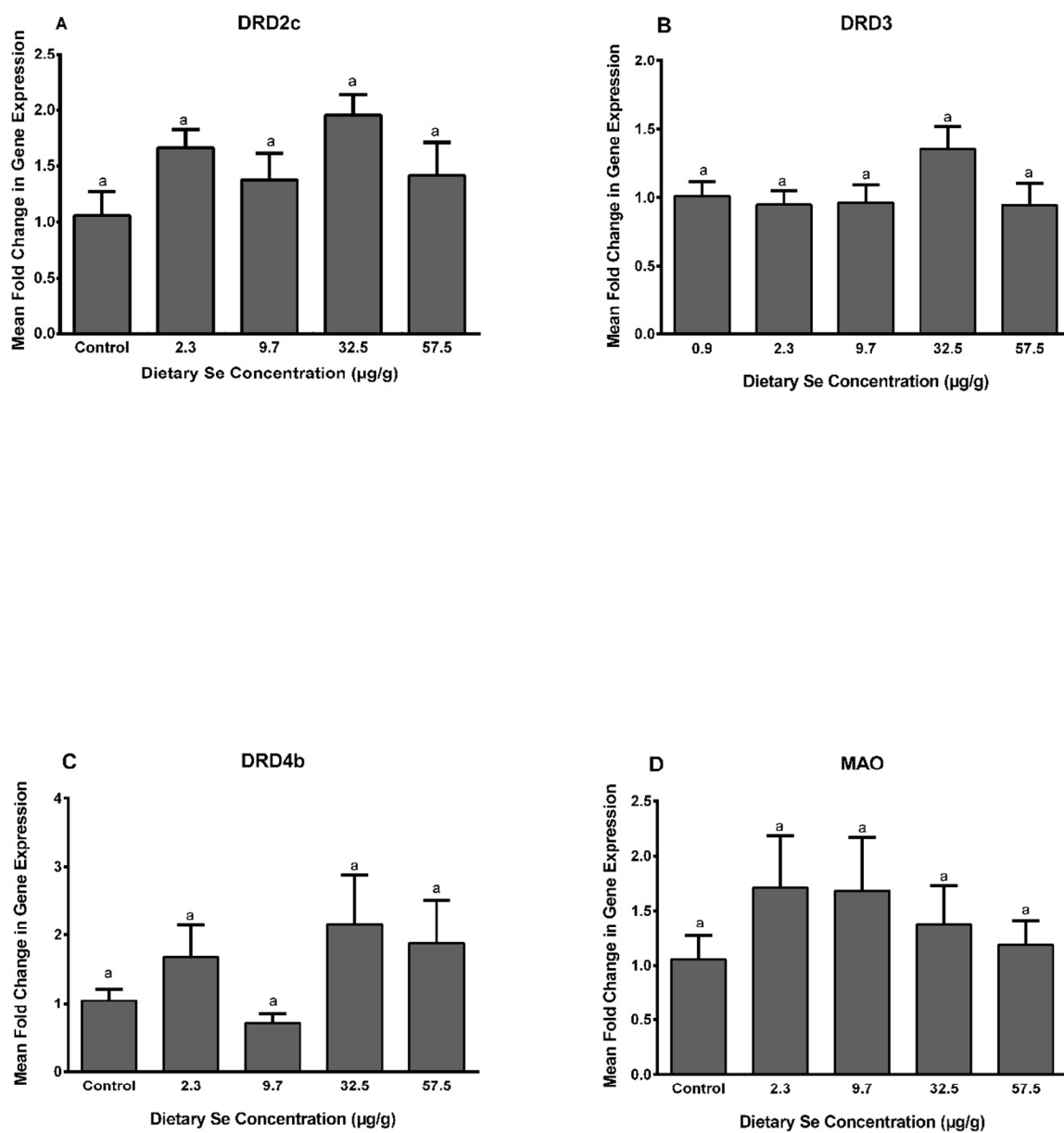


Figure S2. Mean fold change in expression of DRD2c (A), DRD3 (B), DRD4b (C), and MAO (D) in the zebrafish telencephalon. n=4 per treatment.