SUPPLEMENTARY MATERIAL

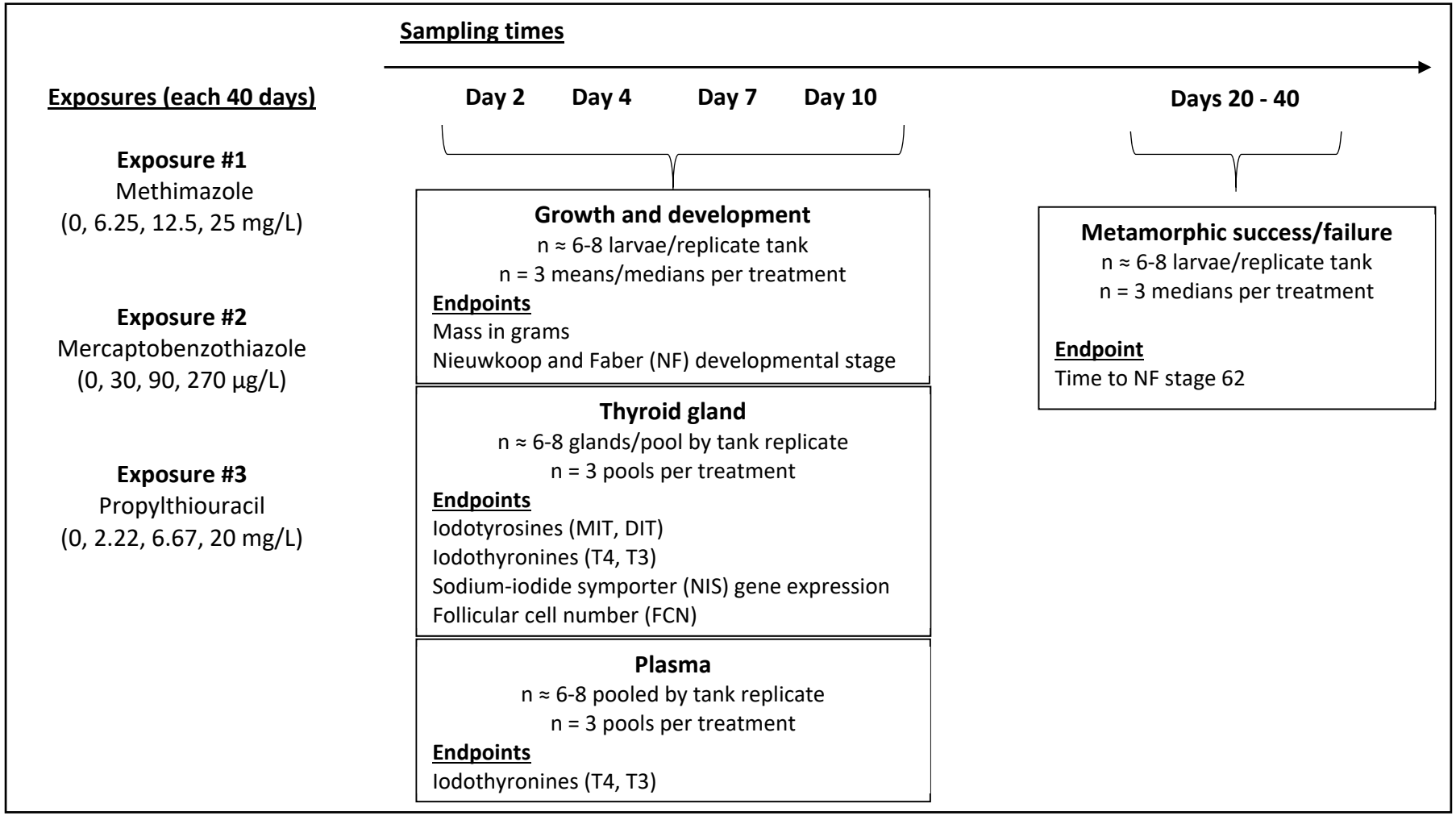

Figure S.1. Study design for pathway-based concentration-response and time-course aqueous exposures using three thyroperoxidase inhibitors starting with pro-metamorphic (Nieuwkoop and Faber stage 53/54) *Xenopus laevis* larvae.

Table S.1. Water chemistry summary for all tanks across each of three separate exposures.

	Temp. (°C)	D.O. (mg L^{-1})	% O_2 Sat.	pH	Conductivity (µS cm^{-1})	Alkalinity ($CaCO_3$ L^{-1})	Hardness ($CaCO_3$ L^{-1})
				MMI			
Avg.	21.3	6.7	76.7	7.4	109.0	45.8	46.3
SD	0.2	0.6	4.8	0.1	2.2	0.7	0.7
Min.	20.6	3.7	67.7	7.2	104.3	45.0	45.0
Max.	21.8	8.1	92.4	7.7	112.4	47.0	47.0
				MBT			
Avg.	21.3	7.0	78.9	7.1	102.6	47.0	46.2
SD	0.2	0.3	3.8	0.3	3.6	0.7	0.7
Min.	20.9	6.4	73.0	6.1	98.8	46.0	45.0
Max.	21.9	7.7	87.0	7.4	109.7	48.0	47.0
				PTU			
Avg.	21.0	6.6	74.3	7.4	101.6	43.8	44.9
SD	0.2	0.3	3.0	0.1	4.2	0.8	1.4
Min.	20.2	6.0	67.0	7.2	95.2	43.0	43.0
Max.	21.5	7.2	81.0	7.6	108.4	45.0	47.0

D.O. = dissolved oxygen; MMI, methimazole; MBT, 2-mercaptobenzothiazole; PTU, propylthiouracil

Table S.2. Analytical verification summary of chemical exposure concentrations by high-performance liquid chromatography with diode array detection.

		MMI						MBT						PTU					
Trt.	Rep. tank	Nominal conc.	Mean measured conc. (mg/L)	SD	CV	*n*	% of nominal	Nominal conc.	Mean measured conc. (µg/L)	SD	CV	*n*	% of nominal	Nominal conc.	Mean measured conc. (mg/L)	SD	CV	*n*	% of nominal
Control	1	0 mg/L	ND	0	0	6	n/a	0 µg/L	ND	0	0	4	n/a	0 mg/L	ND	0	0	5	n/a
	2	0 mg/L	ND	0	0	6	n/a	0 µg/L	ND	0	0	4	n/a	0 mg/L	ND	0	0	5	n/a
	3	0 mg/L	ND	0	0	6	n/a	0 µg/L	ND	0	0	4	n/a	0 mg/L	ND	0	0	5	n/a
Low	1	6.25 mg/L	7.4	0.4	5.4	6	118	30 µg/L	27.0	2.0	7.4	4	90	2.22 mg/L	2.47	0.05	1.9	5	111
	2	6.25 mg/L	7.3	0.4	5.2	6	118	30 µg/L	27.3	1.8	6.5	4	91	2.22 mg/L	2.47	0.05	1.8	5	111
	3	6.25 mg/L	7.4	0.4	5.6	6	118	30 µg/L	27.6	2.2	8.0	4	92	2.22 mg/L	2.47	0.05	1.9	5	111
Grand mean			7.4	0.01	0.2	3			27.3	0.3	1.2	3			2.47	0.00	0.03	3	
Ungrouped trt. mean			7.4	0.4	5.1	18			27.3	1.8	6.7	12			2.47	0.04	1.7	15	
Medium	1	12.5 mg/L	14.7	0.8	5.7	6	118	90 µg/L	79.9	5.8	7.2	4	89	6.67 mg/L	7.48	0.16	2.1	5	112
	2	12.5 mg/L	14.8	0.8	5.7	6	118	90 µg/L	82.3	6.2	7.5	4	91	6.67 mg/L	7.50	0.15	2.0	5	112
	3	12.5 mg/L	14.8	0.8	5.5	6	118	90 µg/L	83.0	6.0	7.3	4	92	6.67 mg/L	7.49	0.16	2.1	5	112
Grand mean			14.8	0.03	0.2	3			81.7	1.6	2.0	3			7.49	0.01	0.1	3	
Ungrouped trt. mean			14.8	0.8	5.3	18			81.7	5.6	6.9	12			7.49	0.15	1.9	15	
High	1	25 mg/L	29.5	1.5	5.0	6	118	270 µg/L	264.3	10.4	3.9	6	98	20 mg/L	22.93	0.48	2.1	5	115
	2	25 mg/L	29.5	1.5	5.0	6	118	270 µg/L	261.9	10.0	3.8	6	97	20 mg/L	22.95	0.50	2.2	5	115
	3	25 mg/L	29.5	1.4	4.9	6	118	270 µg/L	264.5	9.8	3.7	6	98	20 mg/L	22.94	0.48	2.1	5	115
Grand mean			29.5	0.03	0.1	3			263.6	1.4	0.5	3			22.94	0.01	0.05	3	
Ungrouped trt. mean			29.5	1.4	4.7	18			263.6	9.5	3.6	18			22.94	0.45	2.0	15	

MMI, methimazole; MBT, mercaptobenzothiazole; PTU, propylthiouracil; ND, not detected; SD, standard deviation; CV, coefficient of variation; n/a, not applicable; Rep., replicate; Trt., treatment; Conc., concentration; Grand mean, mean of replicate means; Ungrouped treatment mean, mean of all measurements across replicates.

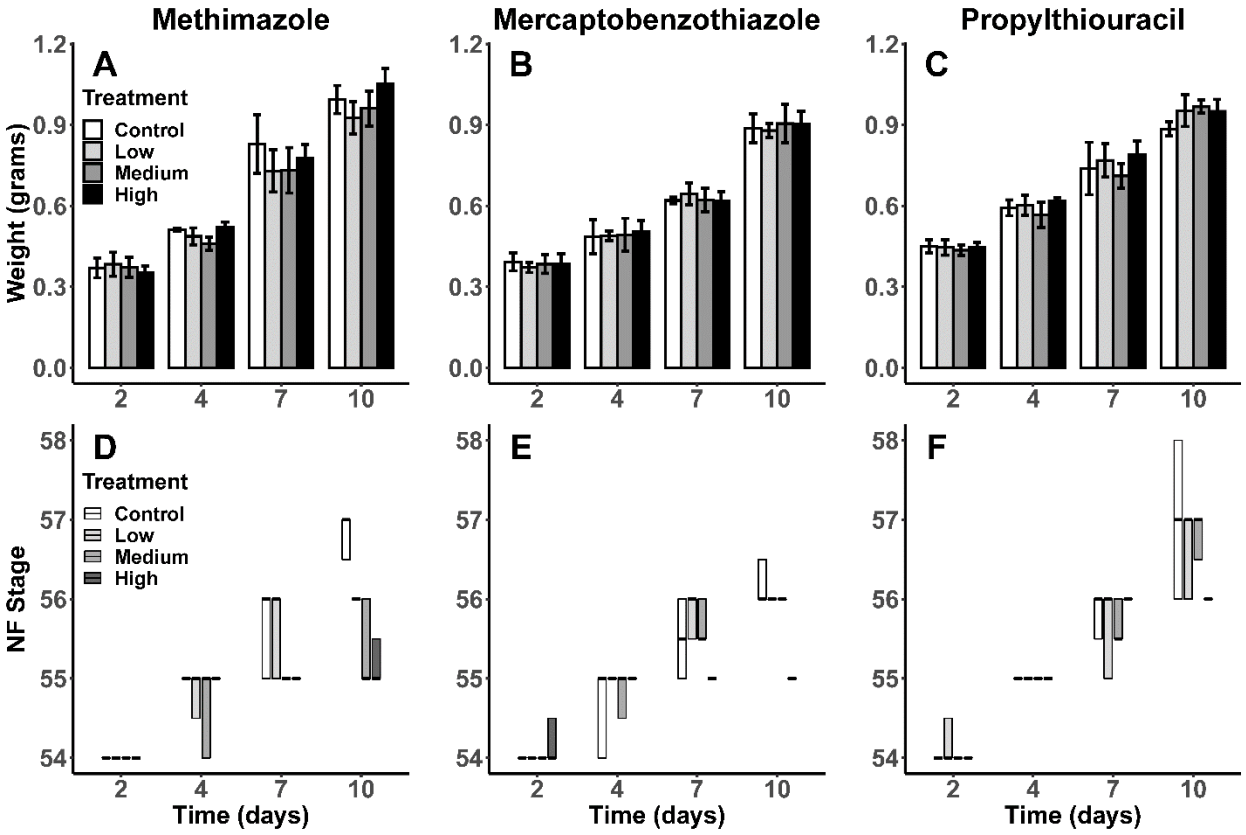

Figure S.2. Mean (± SD) temporal growth (A-C) and median (min-max) metamorphic development by NF stage (D-F) in three separate chemical exposure studies. There was no evidence of an effect on growth and the developmental data were not analyzed statistically. Sample sizes are n = 3 except for the high PTU treatment which has a sample size of n = 2. MMI, methimazole; MBT, mercaptobenzothiazole; PTU, propylthiouracil; MMI:Low, 55 µM; MMI:Med, 110 µM; MMI:High, 220 µM; MBT:Low, 0.18 µM; MBT:Med, 0.54 µM; MBT:High, 1.6 µM; PTU:Low, 13 µM; PTU:Med, 39 µM; PTU:High, 117.5 µM.