Supplementary Materials: Evaluation of Tanshinone IIA Developmental Toxicity in Zebrafish Embryos

Table S1. Crystal data and structure refinement for (Tanshinone IIA).

Empirical formula	$C_{19}H_{18}NO_3$
Formula weight	294.33
Temperature/K	100(2)
Crystal system	N/A
Space group	Pmna
a/Å	6.646(3)
b/Å	9.193(4)
c/Å	24.468(10)
α/°	90.00
β/°	90.00
γ/°	90.00
Volume/Å^3	1494.9(11)
Z	4
ρ_{calc}g/cm^3	1.308
μ/mm^{-1}	0.088
F(000)	624.0
Crystal size/mm^3	0.21 × 0.20 × 0.19
Radiation	MoKα (λ = 0.71073)
2Θ range for data collection/°	4.74 to 50
Reflections collected	7233
Data/restraints/parameters	1429/2/136
Goodness-of-fit on F^2	1.051
Final R indexes [I>=2σ (I)]	R_1 = 0.0529, wR_2 = 0.1679
Final R indexes [all data]	R_1 = 0.0605, wR_2 = 0.1753
Largest diff. peak/hole / e Å^{-3}	0.27/-0.23

Table S2. Lethality (%) of dechorionated embryos exposed to Tan-IIA at 12 hpf.

	Solvent control	1.0 μM	5.0 μM	10.0 μM	20.0 μM	50.0 μM
12 hpf	1.7	5.2	5.0	8.3	10.0	21.0

Table S3. Lethality (%) of chorionic embryos exposed to Tan-IIA at 12 hpf.

	Solvent control	1.5 μM	3.0 μM	6.0 μM	12.0 μM	24.0 μM
24 hpf	0.0	0.0	3.3	8.3	10.0	6.7

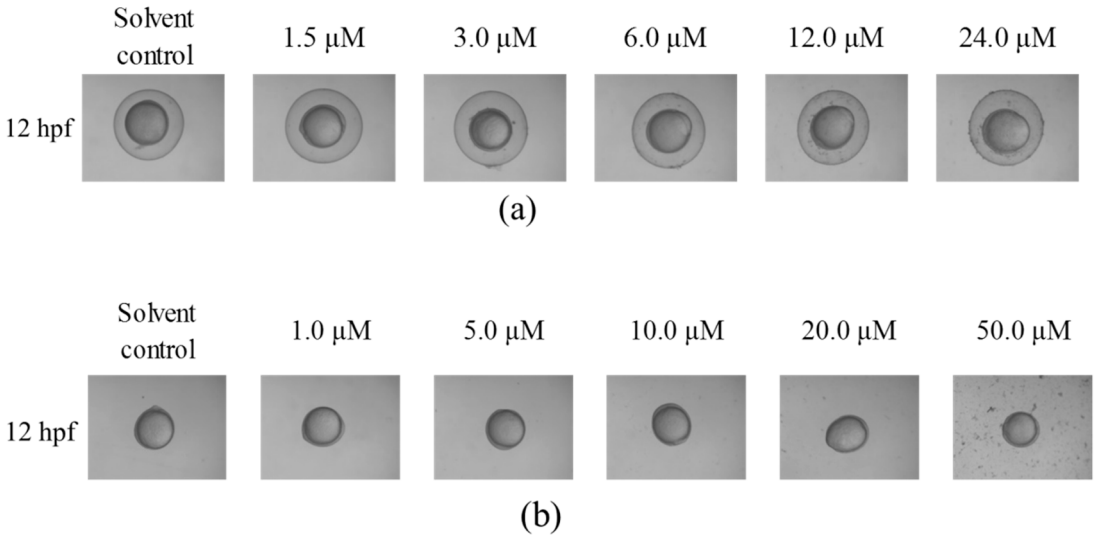

Figure S1. Morphology of zebrafish embryos exposed to Tan-IIA at 12 hpf. (a) Morphology of chorionic embryos; (b) Morphology of dechorionated embryos.

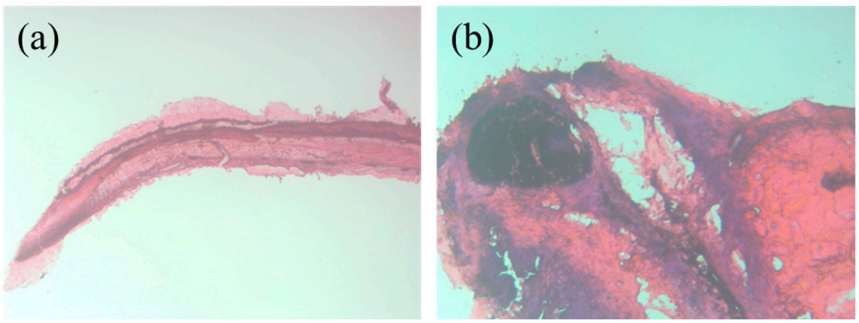

Figure S2. Longitudinal sections of scoliosis (a, ×10) and pericardial edema (b, ×40) with HE staining.

Table S4. Observations of teratogenic effects of dechorionated embryos at 48 hpf depending on concentration of Tan-IIA.

	Solvent control	1 μM	5 μM	10 μM	20 μM	50 μM
Scoliosis				+	+	+
Tail autolysis				+	+	+
Pericardial edema					+	+
Malformation of head					+	+
Malformation of eyes					+	+
Yolk sac edema					+	+
Growth retardation						+

Table S5. Observations of acute toxicity in dechorionated embryos exposed to Tan-IIA.

	Exposure times			
	24 hrs	48 hrs	72 hrs	96 hrs
Coagulated embryos	+	+	+	
Lack of somite formation	+	+		
Non-detachment of the tail	+	+		
Lack of heartbeat		+	+	+