

Table S1 The LC₅₀ of zebrafish after exposure to cyantraniliprole at 24 and 96 hours

Time (h)	Concentration (mg/L)	Mortality (%)	LC ₅₀ (mg/L)	95% confidence (mg/L)	Regression equation
24	3.0	10	7.2	7.1-8.3	y=3.27x+2.19 R=0.9791
	4.0	26			
	6.0	38			
	7.0	40			
	8.0	52			
	9.0	62			
	10.0	74			
96	1.0	20	3.5	3.4-4.0	y=1.78x+4.03 R=0.9812
	2.0	30			
	2.5	34			
	3.0	40			
	3.5	52			
	4.0	54			
	4.5	58			
	5.0	62			
	5.5	66			
	6.0	70			

Table S2 The up-regulated and down-regulated genes after exposure to cyantraniliprole

gene_id	gene_name	gene_length	padj	
ENSDARG00000043196	rnase12	957	3.52E-20	-
ENSDARG00000101754	BX664622.1	8012	2.73E-17	-
novel.327	-	5288	8.88E-15	-
ENSDARG00000055751	fosb	2802	2.84E-14	-
ENSDARG00000071553	zgc:171500	1795	4.18E-13	-
novel.3569	-	864	1.06E-12	-
ENSDARG00000090847	si:ch211-209l18.4	3747	5.24E-10	-
ENSDARG00000037421	egr1	3158	5.24E-10	-
ENSDARG00000100614	zgc:171497	2241	4.07E-09	-
novel.3564	-	3443	1.55E-08	-
ENSDARG00000029695	pgp	1684	7.50E-08	-
ENSDARG00000036096	smad3a	6173	7.50E-08	-
novel.3042	-	2022	1.16E-07	-
novel.2746	-	2693	1.92E-07	-
ENSDARG00000045155	phf5a	1103	2.46E-07	-
ENSDARG00000045159	zdhhc4	1698	6.70E-07	-
novel.5086	-	1420	7.20E-07	-

novel.3565	-	2044	1.21E-06	-
novel.3993	-	4726	1.61E-06	-
ENSDARG00000056270	atpaf2	1963	2.05E-06	-
ENSDARG00000056079	l3mbtl2	5929	2.45E-06	-
novel.2012	-	1078	2.46E-06	-
ENSDARG00000045167	dlgap5	3267	2.90E-06	-
ENSDARG00000051892	kcng4b	1608	3.08E-06	-
ENSDARG00000078132	tex2l	3879	5.13E-06	-
ENSDARG00000056374	noxo1b	2169	6.21E-06	-
novel.5453	-	1698	6.21E-06	-
ENSDARG00000103371	si:dkey-190j3.6	1393	6.36E-06	-
ENSDARG00000056559	ccz1	2080	8.84E-06	-
novel.4150	-	2768	9.18E-06	-
ENSDARG00000098663	fgf19	1032	1.12E-05	-
ENSDARG00000093111	si:ch211-209l18.2	2023	2.08E-05	-
ENSDARG00000017565	itk	2752	2.24E-05	-
ENSDARG00000003167	mlst8	4154	3.15E-05	-
novel.1172	-	1529	3.42E-05	-
ENSDARG00000095786	AL928685.1	664	3.98E-05	-
novel.2130	-	11258	4.38E-05	-
novel.5422	-	1073	4.72E-05	-
ENSDARG00000070714	zgc:173544	6916	4.91E-05	-
ENSDARG00000095918	si:ch211-274k16.9	1659	4.96E-05	-
ENSDARG00000068431	si:ch211-195h23.3	1830	5.30E-05	-
ENSDARG00000092833	CR318588.2	1646	5.72E-05	-
novel.5084	-	699	5.95E-05	-
novel.2741	-	1189	6.02E-05	-
novel.5408	-	3732	6.10E-05	-
ENSDARG00000074779	alms1	7106	6.18E-05	-
novel.3580	-	7456	6.61E-05	-
ENSDARG00000101633	LO017682.1	1578	9.03E-05	-
novel.470	-	1918	9.94E-05	-
ENSDARG00000093411	gad1a	1806	0.000151107	-
ENSDARG00000091234	si:ch73-335l21.4	1499	0.000157439	-
ENSDARG00000039117	tefa	2932	0.00025562	-
novel.7027	-	1441	0.000330981	-
novel.4121	-	2352	0.000330981	-
novel.972	-	1027	0.000330981	-
novel.3567	-	4472	0.000336612	-
novel.4940	-	1542	0.000413556	-
novel.6725	-	6040	0.000425112	-
novel.5345	-	1398	0.000427007	-

ENSDARG00000070239	kn11	5496	0.00046238	-
novel.586	-	7051	0.000501795	-
ENSDARG00000104083	adgre5b.2	2301	0.000514184	-
ENSDARG00000069018	cyp7a1	1987	0.000551665	-
ENSDARG00000099216	atp8b2	1311	0.000648059	-
ENSDARG00000104890	si:dkey-82i20.1	3376	0.000786786	-
ENSDARG00000056059	rangap1b	2514	0.000805467	-
ENSDARG00000073820	zgc:174917	2365	0.000858948	-
ENSDARG00000105562	si:dkey-23i12.7	1843	0.000875191	-
ENSDARG00000099399	thrsp	474	0.000875191	-
ENSDARG00000099949	FP236551.1	2442	0.000881862	-
novel.1480	-	1630	0.000926187	-
ENSDARG00000013576	gadd45bb	1485	0.001009169	-
novel.5629	-	8204	0.00125717	-
novel.2788	-	5984	0.00125717	-
novel.2146	-	1437	0.001628365	-
novel.6129	-	957	0.001839388	-
novel.4159	-	1340	0.00204759	-
ENSDARG00000095719	si:dkey-222h21.2	3116	0.002163224	-
novel.2082	-	373	0.00217495	-
ENSDARG00000093354	si:ch211-57i17.2	2453	0.003035222	-
ENSDARG00000114332	CT573234.1	4889	0.003035222	-
novel.582	-	965	0.003035222	-
novel.4116	-	2336	0.003406831	-
ENSDARG00000075826	msh4	3920	0.003539271	-
novel.4841	-	875	0.00392341	-
ENSDARG00000045522	acot15	2060	0.004295054	-
ENSDARG00000019307	dusp5	1522	0.004313322	-
ENSDARG00000094344	si:dkey-222h21.8	3154	0.004465474	-
ENSDARG00000079933	si:dkey-5g14.1	1953	0.004609486	-
novel.711	-	4232	0.004609486	-
ENSDARG00000099583	CABZ01034082.1	3434	0.004652736	-
ENSDARG00000056590	calca	1673	0.004751947	-
novel.4340	-	3280	0.004780726	-
novel.5905	-	1554	0.004917421	-
novel.6949	-	741	0.004920626	-
ENSDARG00000076126	actc1a	1425	0.00493431	-
novel.2782	-	8167	0.005160108	-
novel.2101	-	661	0.005429641	-
ENSDARG00000059246	hnrnpd	2723	0.005659325	-
ENSDARG00000100311	si:dkey-165e24.1	4316	0.005659325	-
ENSDARG00000035562	mpdu1a	2689	0.005776765	-

ENSDARG00000002745	tdh	2382	0.005914487	-
ENSDARG00000069865	grxcr1	989	0.006004955	-
novel.2137	-	1136	0.006004955	-
ENSDARG00000068732	spry4	3447	0.006004955	-
ENSDARG00000103324	si:ch211-127b6.2	5416	0.006115068	-
novel.4865	-	3052	0.006301165	-
ENSDARG00000019651	zgc:162239	1099	0.006470279	-
novel.3570	-	1534	0.006470279	-
novel.4016	-	2380	0.006929516	-
ENSDARG00000059003	strip2	4892	0.007088087	-
novel.5454	-	1563	0.007221195	-
ENSDARG00000069095	gls2a	1858	0.0072768	-
ENSDARG00000079191	zgc:172122	1610	0.007348352	-
novel.5976	-	1868	0.007660519	-
novel.7325	-	1470	0.007660519	-
ENSDARG00000079549	cdc42ep1a	2145	0.007832676	-
ENSDARG00000105507	zgc:112234	652	0.007952304	-
ENSDARG00000095236	CT990618.1	2866	0.007965495	-
novel.1215	-	1936	0.007984598	-
novel.5406	-	5079	0.008117643	-
ENSDARG00000075045	cxcl18b	1101	0.008150625	-
ENSDARG00000090338	fam20cb	2523	0.008387836	-
ENSDARG00000078625	fgf9	428	0.008503122	-
ENSDARG00000095840	CU929426.1	742	0.008539144	-
novel.6788	-	1244	0.008977441	-
ENSDARG00000058357	ankrd33ba	1994	0.01014907	-
novel.368	-	6279	0.010250542	-
ENSDARG00000052470	igfbp2a	1748	0.010250542	-
ENSDARG00000052343	spata18	3175	0.010250542	-
novel.5273	-	3117	0.010250542	-
ENSDARG00000076106	flr43	2037	0.011641579	-
ENSDARG00000006588	zgc:111983	2242	0.011641579	-
ENSDARG00000039269	arg2	2257	0.013219824	-
ENSDARG00000041323	csdc2a	1348	0.013746158	-
ENSDARG00000037874	cyp3c2	1699	0.013791068	-
ENSDARG00000044098	egr2a	2325	0.01402059	-
novel.4710	-	1901	0.014123651	-
novel.5409	-	2509	0.014559062	-
ENSDARG00000102225	si:ch211-205a14.7	3545	0.014650037	-
ENSDARG00000056477	ccdc125	1494	0.014662287	-
novel.2786	-	8826	0.014662287	-
ENSDARG00000051890	hp	3296	0.014757183	-

ENSDARG00000104231	opn9	2166	0.015397928	-
ENSDARG00000020133	jdp2b	2366	0.015513805	-
novel.6721	-	6435	0.015539859	-
novel.4153	-	3650	0.01665141	-
novel.2107	-	741	0.01665141	-
ENSDARG00000055075	svila	10218	0.016794869	-
ENSDARG00000026925	nos2a	4149	0.016803571	-
ENSDARG00000078247	vip	1109	0.016886531	-
novel.6722	-	1750	0.017402045	-
ENSDARG00000101514	ftt64	3414	0.018346117	-
ENSDARG00000088825	citb	4749	0.019186972	-
novel.2793	-	1660	0.01932397	-
ENSDARG00000037097	slc7a2	4199	0.019433614	-
novel.4289	-	8247	0.019433614	-
novel.2086	-	499	0.019446171	-
ENSDARG00000062971	sdhaf2	2373	0.019591233	-
ENSDARG00000103218	BX927130.3	3090	0.019763125	-
novel.6728	-	4874	0.020239513	-
ENSDARG00000000796	nr4a1	5776	0.020239513	-
ENSDARG00000060397	hhip	4784	0.020239513	-
novel.2200	-	2109	0.020659064	-
ENSDARG00000045672	il26	639	0.021462344	-
novel.6637	-	2566	0.022178208	-
novel.7305	-	2393	0.023166995	-
ENSDARG00000055752	npas4a	4736	0.02362949	-
ENSDARG00000030465	tmem263	4719	0.02362949	-
novel.5774	-	2099	0.023992679	-
novel.3459	-	8236	0.024033654	-
novel.4089	-	2659	0.025182178	-
novel.2783	-	2130	0.025894296	-
ENSDARG00000097503	si:ch73-288o11.5	1222	0.025931935	-
ENSDARG00000100006	si:ch211-76m11.5	5157	0.026485039	-
ENSDARG00000109749	si:ch211-162i8.7	1171	0.026485039	-
ENSDARG00000099470	muc5.3	17245	0.026485039	-
novel.5733	-	4304	0.026485039	-
ENSDARG00000074806	afap112	4204	0.026572043	-
novel.3279	-	1878	0.027273807	-
ENSDARG00000078768	abhd15a	4369	0.029352944	-
novel.6789	-	1474	0.029493022	-
ENSDARG00000020455	si:ch211-171h4.3	1902	0.030332004	-
novel.4233	-	3133	0.030332004	-
ENSDARG00000006409	mapk12b	1695	0.031533907	-

ENSDARG00000020258	ewsr1a	3035	0.031920698	-
novel.2091	-	396	0.031920698	-
ENSDARG00000101997	si:dkey-191j3.2	5959	0.034026936	-
ENSDARG00000104540	cyp2aa8	5478	0.034104231	-
ENSDARG00000035694	stm	3344	0.034104231	-
ENSDARG00000007371	slc26a3.1	2244	0.034104231	-
ENSDARG00000033029	pkd1b	11674	0.035235061	-
ENSDARG00000002764	miox	1311	0.03618316	-
novel.5401	-	3618	0.03618316	-
novel.2110	-	2684	0.03618316	-
ENSDARG00000076056	si:ch211-286f9.2	1148	0.036663254	-
novel.92	-	1485	0.036663254	-
ENSDARG00000101353	fl3b	876	0.038426815	-
ENSDARG00000099466	si:dkey-190j3.2	805	0.038426815	-
novel.6825	-	1304	0.0399858	-
ENSDARG00000068876	zgc:153031	3094	0.0399858	-
novel.3370	-	1260	0.0399858	-
ENSDARG00000035632	ccl19a.2	610	0.040880926	-
ENSDARG00000038288	cd151	1865	0.040979543	-
ENSDARG00000056888	dnah5l	13897	0.041063101	-
novel.4725	-	1128	0.041251109	-
ENSDARG00000002696	gnb3b	2642	0.041355838	-
ENSDARG00000117011	ewsr1b	1311	0.041476355	-
ENSDARG00000058389	ccl19a.1	1733	0.0418485	-
ENSDARG00000102292	CU013526.1	541	0.042165158	-
ENSDARG00000011797	fam46bb	2981	0.04276722	-
ENSDARG00000078451	gzm3	802	0.042832706	-
novel.2183	-	1918	0.044028402	-
ENSDARG00000061948	amotl2b	2985	0.044061748	-
ENSDARG00000058480	chtf18	3982	0.044216421	-
ENSDARG00000113826	si:ch211-223k15.1	7581	0.044287232	-
ENSDARG00000104919	si:ch211-153b23.3	3256	0.044486918	-
ENSDARG00000091926	si:dkey-103e21.5	1203	0.04519383	-
ENSDARG00000115041	flr50	1239	0.046007432	-
ENSDARG00000037056	zte38	1411	0.046007432	-
ENSDARG00000024759	inhbab	4118	0.046400111	-
ENSDARG00000060622	si:ch73-14h1.2	2899	0.046641756	-
novel.1618	-	435	0.046641756	-
ENSDARG00000102440	CABZ01070852.1	3258	0.046837199	-
ENSDARG00000025428	socs3a	1935	0.047211086	-
ENSDARG00000114306	BX248108.1	1761	0.047211086	-
ENSDARG00000011171	si:ch211-12m10.1	11720	0.047575259	-

ENSDARG00000079143	si:ch73-278m9.1	1012	0.04896424	-
novel.5874	-	1973	5.71E-09	+
novel.5858	-	2764	9.00E-08	+
novel.4186	-	745	2.46E-07	+
ENSDARG00000019239	cull1a	3711	4.23E-07	+
ENSDARG00000068575	tmem51a	2311	1.07E-06	+
novel.1278	-	4546	1.43E-06	+
ENSDARG00000023583	coq9	1387	1.76E-06	+
novel.5708	-	626	1.76E-06	+
novel.6664	-	1699	1.99E-06	+
novel.989	-	385	2.50E-06	+
novel.1279	-	1020	6.72E-06	+
ENSDARG00000090623	si:dkeyp-106c3.1	6581	6.74E-06	+
novel.1280	-	793	9.65E-06	+
novel.1292	-	1712	1.52E-05	+
novel.1281	-	643	2.14E-05	+
ENSDARG00000094779	si:dkey-192d15.1	2717	3.69E-05	+
novel.5270	-	1756	4.60E-05	+
ENSDARG00000041068	got2a	2573	4.88E-05	+
novel.5251	-	3135	6.60E-05	+
ENSDARG00000092890	si:ch73-44m9.5	496	7.25E-05	+
ENSDARG00000076923	kazna	2910	9.03E-05	+
ENSDARG00000062054	cpt1ab	5280	9.19E-05	+
novel.4261	-	2925	0.00015512	+
ENSDARG00000092520	si:dkey-250k15.10	1225	0.000257968	+
ENSDARG00000042045	hmg20b	4815	0.00028525	+
novel.4096	-	2637	0.000296755	+
ENSDARG00000032102	prdx3	1523	0.000330593	+
novel.6662	-	4762	0.000330981	+
ENSDARG00000026941	fbx14	3130	0.000406551	+
ENSDARG00000071036	si:dkey-286j15.3	1080	0.000509153	+
ENSDARG00000034403	zgc:173443	920	0.000513111	+
ENSDARG00000044566	fabp6	508	0.000531893	+
novel.426	-	1310	0.0005344	+
novel.6663	-	4224	0.000786786	+
ENSDARG00000004402	elovl6	2062	0.000814271	+
novel.6614	-	3089	0.000969364	+
ENSDARG00000113433	zgc:158316	1493	0.000979123	+
ENSDARG00000056551	slc22a13a	1781	0.001322099	+
novel.1353	-	476	0.001472292	+
novel.5856	-	4999	0.001567591	+
novel.3007	-	4437	0.001628365	+

ENSDARG00000101051	ctsb	2097	0.001628365	+
ENSDARG00000078177	cxcr3.1	1038	0.001682643	+
novel.2679	-	792	0.001800828	+
ENSDARG00000099241	ppp2cb	2021	0.002163224	+
ENSDARG00000012796	hnmt	1042	0.003067015	+
ENSDARG00000100865	si:dkey-269o24.1	3516	0.004295054	+
ENSDARG00000020292	si:ch211-254n4.3	1951	0.004295054	+
ENSDARG00000099384	si:dkey-238k10.1	1006	0.004313021	+
ENSDARG00000079657	si:dkey-53k12.1	681	0.004335001	+
novel.3213	-	1791	0.004537123	+
novel.5860	-	4292	0.004586848	+
ENSDARG00000008948	zgc:123275	2315	0.004917421	+
novel.5264	-	1677	0.005042901	+
novel.5249	-	619	0.005396005	+
novel.5353	-	3004	0.005659325	+
novel.4385	-	744	0.005659325	+
novel.214	-	301	0.006004955	+
novel.5855	-	5119	0.006324592	+
ENSDARG00000103241	CR381673.2	747	0.006442821	+
novel.3845	-	2446	0.006470279	+
novel.4381	-	3434	0.006657043	+
ENSDARG00000023203	mhc1lda	3093	0.006657043	+
ENSDARG00000099796	si:dkey-285b23.3	1780	0.007660519	+
novel.4331	-	799	0.007920234	+
ENSDARG00000077571	zgc:174862	4772	0.00823281	+
novel.1272	-	1590	0.008562538	+
novel.1273	-	7244	0.009545795	+
novel.5877	-	1586	0.01014907	+
novel.3364	-	932	0.012809026	+
ENSDARG00000095822	BX324132.2	1145	0.013219824	+
novel.3191	-	1475	0.013330067	+
ENSDARG00000113899	zgc:77650	4788	0.01402059	+
novel.5352	-	2507	0.014510275	+
ENSDARG00000093279	si:dkey-11o1.3	1479	0.014559062	+
ENSDARG00000018002	ecil	1131	0.014700051	+
ENSDARG00000057173	ifit8	2136	0.018346117	+
ENSDARG00000099525	si:ch1073-13h15.3	1845	0.018346117	+
ENSDARG00000056376	ankrd37	1076	0.018730686	+
novel.3212	-	2090	0.019446171	+
novel.6577	-	1434	0.019942037	+
novel.3229	-	3528	0.022397813	+
ENSDARG00000056226	creb3l3a	2158	0.02244502	+

ENSDARG00000053215	me1	2475	0.024413276	+
novel.6582	-	1943	0.025392154	+
ENSDARG00000013794	klf11b	2064	0.029393672	+
ENSDARG00000060594	hadhab	3133	0.029493022	+
novel.3231	-	6342	0.030332004	+
novel.3226	-	10693	0.031920698	+
ENSDARG00000104367	zgc:194469	4824	0.031920698	+
ENSDARG00000030163	cdk21	939	0.035017211	+
ENSDARG00000008287	fam114a1	2273	0.035017211	+
ENSDARG00000087873	eevs	1887	0.035017211	+
novel.2579	-	2644	0.035017211	+
novel.4997	-	1466	0.03558161	+
novel.3211	-	4205	0.03558161	+
ENSDARG00000056090	capza1b	2708	0.035733149	+
ENSDARG00000096990	si:ch1073-340i21.2	1319	0.03618316	+
novel.7361	-	1551	0.036185889	+
ENSDARG00000104593	cyp2k18	2335	0.037672729	+
novel.4229	-	1712	0.037926502	+
novel.6264	-	1573	0.038559261	+
novel.5175	-	2760	0.0399858	+
novel.3225	-	3575	0.041063101	+
ENSDARG00000094131	fr19	2032	0.042165158	+
novel.1949	-	1824	0.042165158	+
novel.6666	-	1077	0.044287232	+
novel.4792	-	569	0.044386894	+
ENSDARG00000029432	tph1a	1977	0.044486918	+
novel.3184	-	5690	0.044658694	+
novel.6806	-	2116	0.044811242	+
ENSDARG00000008931	renbp	1889	0.04519383	+
ENSDARG00000022614	ddx43	2518	0.04519383	+
novel.4525	-	1372	0.046641756	+
novel.3983	-	4199	0.049735747	+
