Anti-proliferative and pro-apoptotic activities of synthesized 3,4,5 tri-methoxy ciprofloxacin chalcone hybrid, through P_{53} up-regulation in HepG2 and MCF7 cell lines.

"Anti-cancer activity of ciprofloxacin chalcone hybrid"

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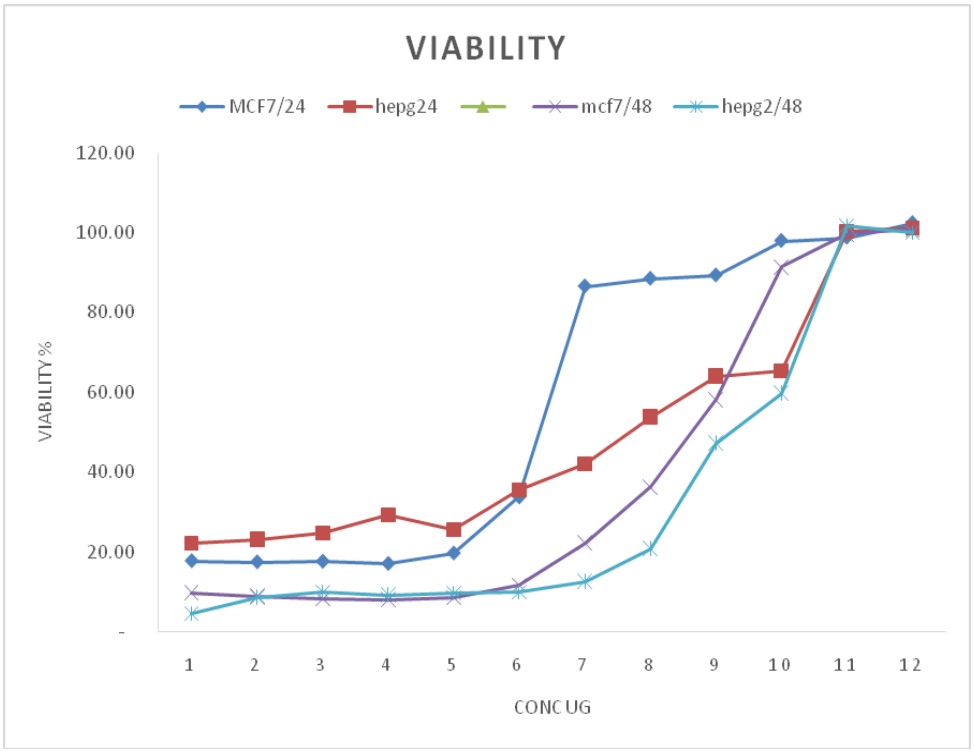
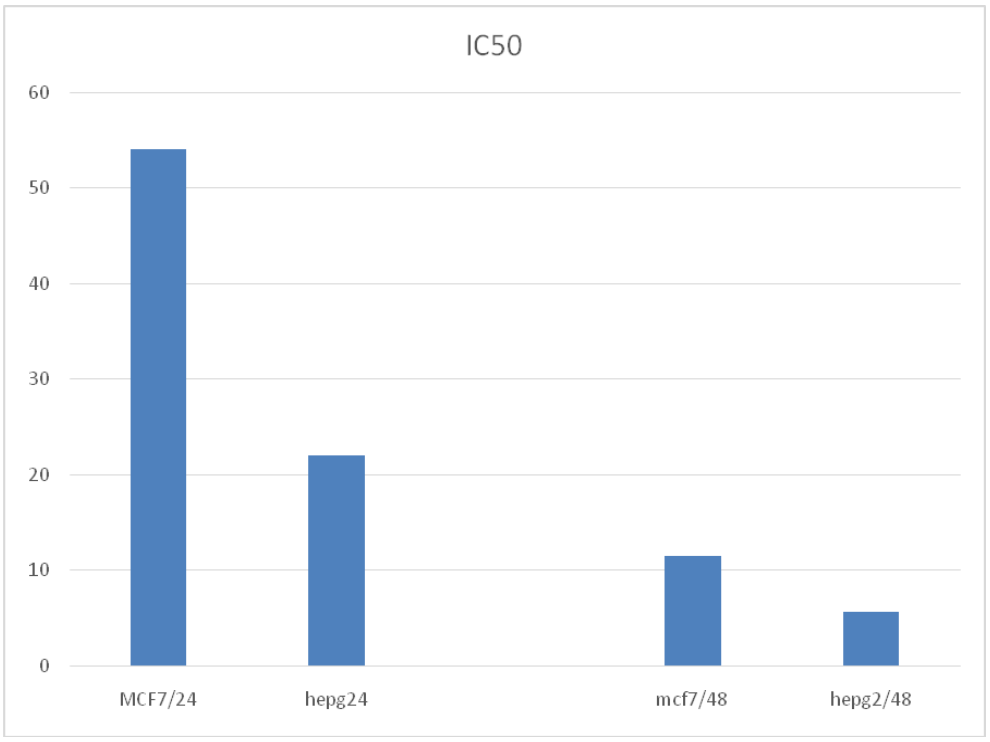
CONTENTS

S1- CELL VIABILITY TEST , IC_{50} CALCULATION





MCF7/24hrs	1	2	3	4	5	6	7	8	9	10	11	12	
	0.042	0.043	0.044	0.041	0.044	0.08	0.192	0.207	0.173	0.198	0.226	0.219	
	0.044	0.042	0.042	0.037	0.043	0.075	0.174	0.272	0.214	0.26	0.252	0.274	
	0.042	0.041	0.041	0.045	0.055	0.088	0.257	0.158	0.256	0.247	0.233	0.244	
	0.042667	0.042	0.042333	0.041	0.047333	0.081	0.207667	0.212333	0.214333	0.235	0.237	0.245667	
	17.77778	17.5	17.63889	17.08333	19.72222	33.75	86.52778	88.47222	89.30556	97.91667	98.75	102.3611	
	0.251	0.252	0.254	0.23	0.221	0.218	0.268	0.271	0.222	0.227	0.225	0.278	**0.24**
cc													
HepG2	0.047	0.036	0.042	0.041	0.044	0.063	0.073	0.094	0.121	0.121	0.177	0.175	
	0.039	0.04	0.046	0.069	0.044	0.065	0.07	0.084	0.115	0.11	0.18	0.169	
	0.028	0.043	0.039	0.04	0.043	0.054	0.072	0.097	0.091	0.103	0.155	0.172	
	0.038	0.039667	0.042333	0.05	0.043667	0.060667	0.071667	0.091667	0.109	0.111333	0.170667	0.172	
	22.35294	23.33333	24.90196	29.41176	25.68627	35.68627	42.15686	53.92157	64.11765	65.4902	100.3922	101.1765	
cc	0.143	0.196	0.138	0.172	0.16	0.171	0.156	0.125	0.198	0.145	0.207	0.197	**0.16**

48 hr	1	2	3	4	5	6	7	8	9	10	11	12	
A	0.081	0.048	0.046	0.045	0.051	0.073	0.116	0.265	0.436	0.595	0.522	0.522	
B	0.054	0.049	0.045	0.043	0.044	0.05	0.103	0.154	0.187	0.531	0.547	0.547	
C	0.026	0.049	0.045	0.044	0.045	0.067	0.144	0.17	0.319	0.354	0.544	0.563	
	0.053667	0.048667	0.045333	0.044	0.046667	0.063333	0.121	0.196333	0.314	0.493333	0.537667	0.544	
	9.938272	9.012346	8.395062	8.148148	8.641975	11.7284	22.40741	36.35802	58.14815	91.35802	99.5679	100.7407	
D	0.488	0.521	0.743	0.667	0.46	0.687	0.4	0.412	0.734	0.486	0.564	0.415	0.54
E	0.0224	0.047	0.052	0.053	0.052	0.055	0.063	0.109	0.211	0.281	0.5	0.566	
F	0.025	0.048	0.056	0.054	0.058	0.061	0.072	0.123	0.252	0.272	0.553	0.547	
G	0.031	0.05	0.059	0.048	0.051	0.051	0.075	0.115	0.319	0.435	0.625	0.538	
	0.026133	0.048333	0.055667	0.051667	0.053667	0.055667	0.07	0.115667	0.260667	0.329333	0.559333	0.550333	
	4.751515	8.787879	10.12121	9.393939	9.757576	10.12121	12.72727	21.0303	47.39394	59.87879	101.697	100.0606	
H	0.462	0.383	0.438	0.575	0.684	0.703	0.579	0.539	0.577	0.582	0.566	0.56	0.5

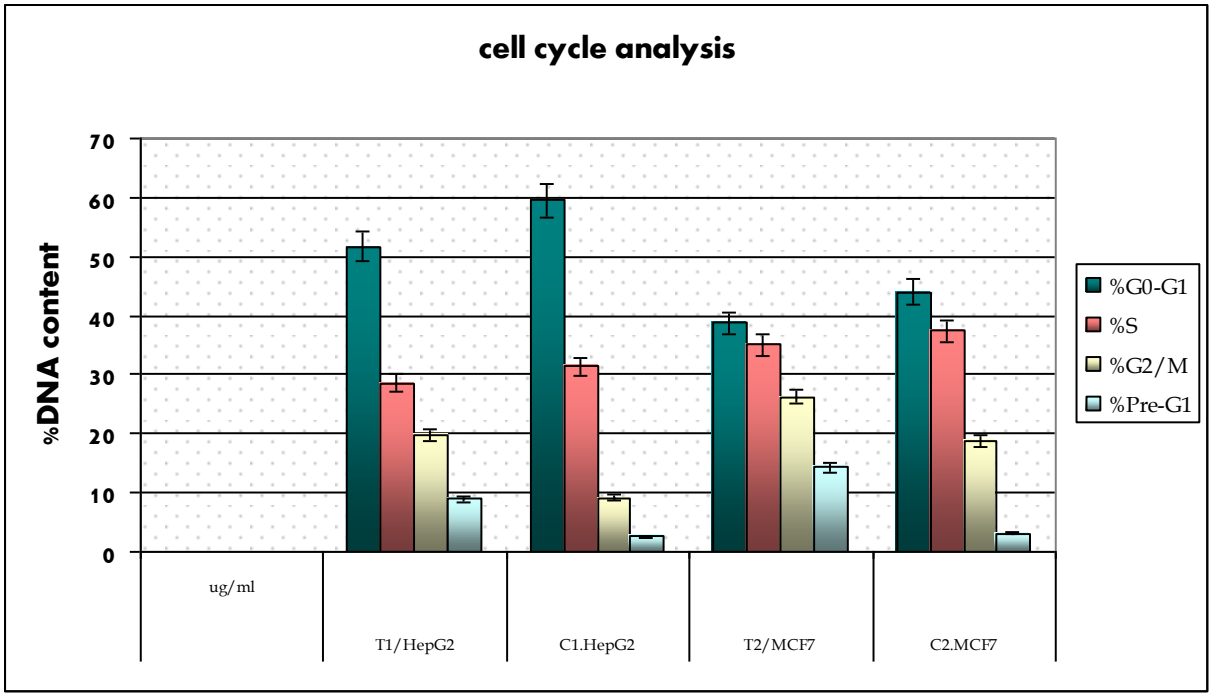
	MCF7/24	hepg24		mcf7/48	hepg2/48
2000	17.78	22.35		9.94	4.75
100	17.50	23.33		9.01	8.79
500	17.64	24.90		8.40	10.12
250	17.08	29.41		8.15	9.39
125	19.72	25.69		8.64	9.76
62.5	33.75	35.69		11.73	10.12
32	86.53	42.16		22.41	12.73
16	88.47	53.92		36.36	21.03

8	89.31	64.12	58.15	47.39
4	97.92	65.49	91.36	59.88
2	98.75	100.39	99.57	101.70
1	102.36	101.18	100.74	100.06

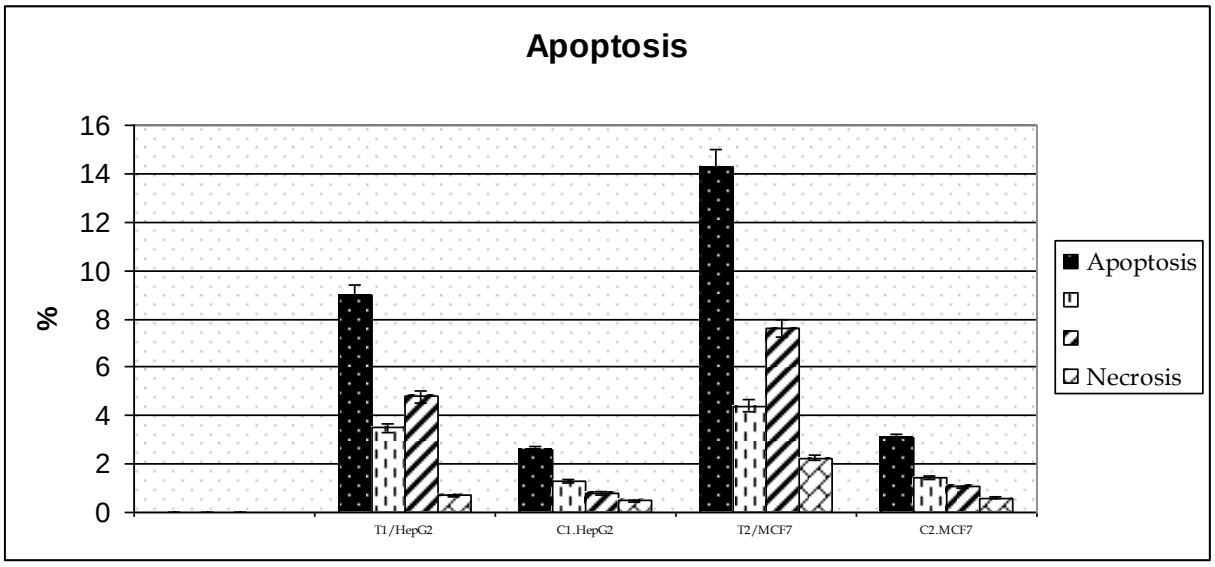
	MCF7/24	hepg24	mcf7/48	hepg2/48
IC50	54	22	11.5	5.6

S2- CELL CYCLE ANALYSIS

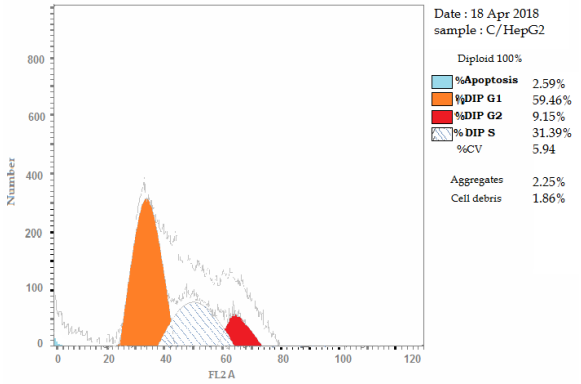
Sample data			Results				
Ser	**Sample code**	**Used conc. ug/ml**	**%G0-G1**	**%S**	**%G2/M**	**%Pre-G1**	**Comment**
1	T1/HepG2		51.66	28.55	19.79	8.97	PreG1apoptosis&Cell growth arrest@G2/M
2	C1.HepG2		59.46	31.39	9.15	2.59	PreG1apoptosis&Cell growth arrest@G2/M
3	T2/MCF7		38.71	35.01	26.28	14.27	PreG1apoptosis&Cell growth arrest@G2/M
4	C2.MCF7		43.94	37.36	18.7	3.07	

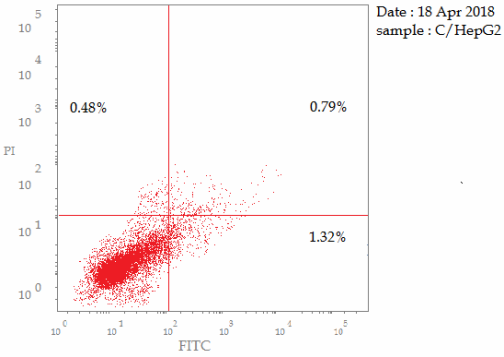


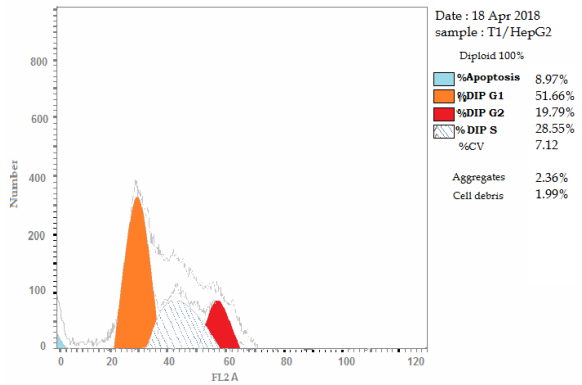
		conc. ug/ml	Apoptosis			Necrosis
			Total	Early	Late	
1	T1/HepG2		8.97	3.49	4.79	0.69
2	C1.HepG2		2.59	1.32	0.79	0.48
3	T2/MCF7		14.27	4.41	7.6	2.26
4	C2.MCF7		3.07	1.43	1.05	0.59

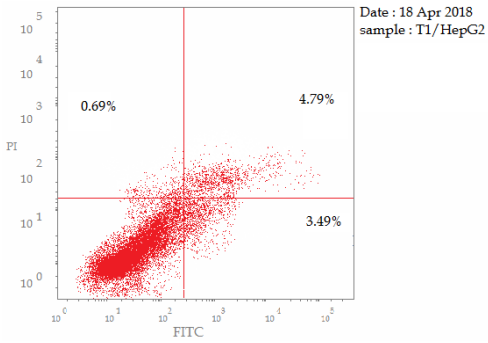


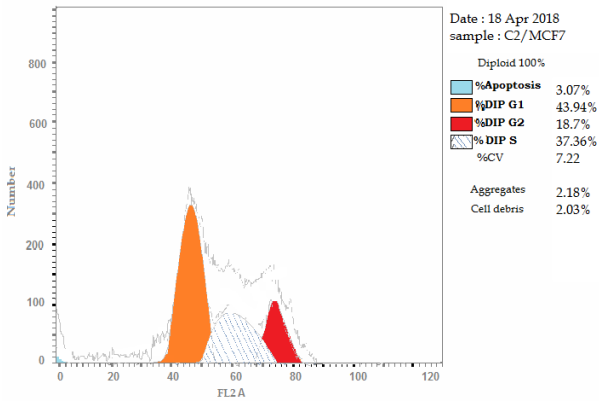
Detailed results

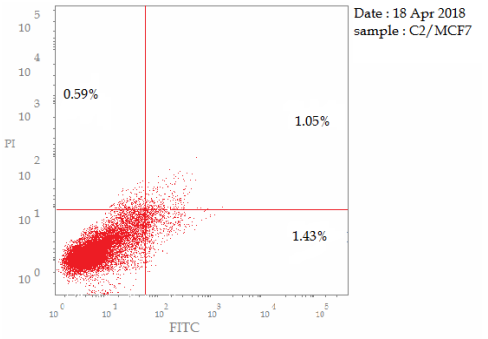


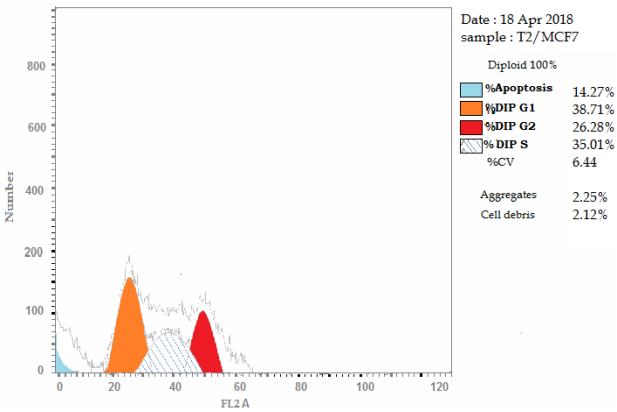


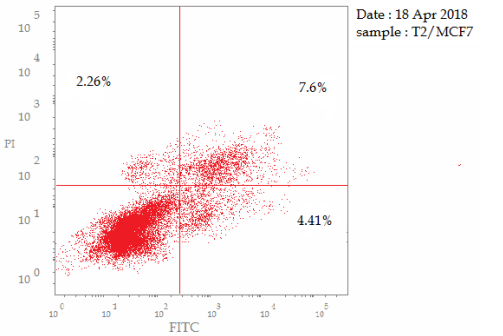




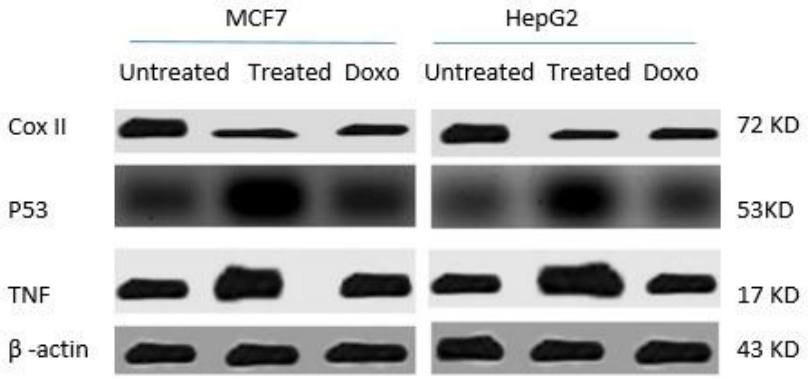








S3- WESTERN BLOTTING



p53

	MCF7			HepG2		
	Control	Tested drug	doxo	Control	Tested drug	doxo
trial 1	1	2.5	1.75	1	3	1.9
trial 2	1	2.51	1.751	1	3	1.99
trial 3	1	2.499	1.749	1	3.1	1.91
trial 4	1	2.5	1.75	1	3.1	1.9
trial 5	1	2.5	1.75	1	3	1.9
avg	1	2.5018	1.75	1	3.04	1.92
st dev	0	0.004118	0.000632	0	0.04899	0.035214

cox2

	MCF7			HepG2		
	Control	Tested drug	doxo	Control	Tested drug	doxo
trial 1	1	0.293097	0.4	1	0.31	0.5
trial 2	1	0.293098	0.41	1	0.32	0.49
trial 3	1	0.291098	0.39	1	0.3	0.5
trial 4	1	0.293098	0.4	1	0.31	0.48
trial 5	1	0.292098	0.4	1	0.31	0.49
avg	1	0.292498	0.4	1	0.31	0.492
st dev	0	0.0008	0.006325	0	0.006325	0.007483

TNF-alpha

	MCF7			HepG2		
	Control	Tested drug	doxo	Control	Tested drug	doxo
trial 1	1	1.87706	1.8	1	2.5	1.35
trial 2	1	1.87806	1.81	1	2.51	1.34
trial 3	1	1.87906	1.79	1	2.52	1.35
trial 4	1	1.87806	1.8	1	2.5	1.33
trial 5	1	1.87806	1.8	1	2.5	1.35
avg	1	1.87806	1.8	1	2.506	1.344
st dev	0	0.000632	0.006325	0	0.008	0.008

S4- RT-PCR RESULTS

p53

	MCF7			HepG2		
	Control	Tested drug	doxo	Control	Tested drug	doxo
trial 1	1	15.349	6	1	6.58	3.7
trial 2	1	15.34	6.1	1	6.58	3.6
trial 3	1	15.348	5.9	1	6.59	3.8
trial 4	1	15.349	6	1	6.57	3.71
trial 5	1	15.348	6	1	6.58	3.69
avg	1	15.3468	6	1	6.58	3.7
st dev	0	0.003429	0.063246	0	0.006325	0.063561

cox2

	MCF7			HepG2		
	Control	Tested drug	doxo	Control	Tested drug	doxo
trial 1	1	0.393097	0.5	1	0.41	0.6
trial 2	1	0.393098	0.51	1	0.42	0.59
trial 3	1	0.391098	0.49	1	0.4	0.6
trial 4	1	0.393098	0.5	1	0.41	0.58
trial 5	1	0.392098	0.5	1	0.41	0.59
avg	1	0.392498	0.5	1	0.41	0.592
st dev	0	0.0008	0.006325	0	0.006324555	0.007483

TNF-alpha

	MCF7			HepG2		
	Control	Tested drug	doxo	Control	Tested drug	doxo
trial 1	1	2.87706	2.2	1	3.5	1.75
trial 2	1	2.87806	2.21	1	3.51	1.74
trial 3	1	2.87906	2.19	1	3.52	1.75
trial 4	1	2.87806	2.2	1	3.5	1.73
trial 5	1	2.87806	2.2	1	3.5	1.75
avg	1	2.87806	2.2	1	3.506	1.744
st dev	0	0.000632	0.006325	0	0.008	0.008

primers

p53 F 5'- CCCCTCCTGGCCCCTGTCATCTTC-3',
p53 R 5'-GCAGCGCCTCACAACCTCCGTCAT-3'.

TNF-α F 5’- TTGACCTCAGCGCTGAGTTG -3’
TNF-α R 5’- CCTGTAGCCCACGTCGTAGC -3’

COX-2 F 5'- ACTGTACGGGGTTTGTGACTAG -3'
COX-2 F 5'- ACTGTACGGGGTTTGTGACTAG -3'

β-actin F 5’-GTGACATCCACACCCAGAGG-3’
β-actin R 5’-ACAGGATGTCAAAACTGCCC-3’