Supplementary Table S1. Antioxidant activity of extract/fractions of *O. bracteata* in Superoxide anion radical scavenging assay.

Conc (µg/ml)	Scavenging (%)					
	Rutin	**Obhex**	**Obcl**	**Obea**	**Obbu**	**Obaq**
25	39.36± 2.60^{c}	16.85 ± 2.18^{d}	18.33 ± 1.21^{d}	13.77 ± 2.99^{d}	14.76 ± 3.18^{d}	15.62 ± 1.51^{d}
50	43.91± 2.93^{c}	30.87 ± 1.79^{c}	31.61 ± 2.23^{c}	30.01 ± 3.39^{c}	22.88 ± 2.10^{d}	19.43 ± 2.28^{d}
100	74.29± 1.09^{b}	50.80 ± 1.57^{b}	52.40 ± 1.82^{b}	57.81± 1.81^{b}	41.21 ± 1.25^{c}	29.64 ± 1.66^{c}
200	77.74± 1.45^{b}	59.78 ± 1.69^{a}	62.85 ± 1.98^{a}	69.61± 3.09^{b}	57.32 ± 0.68^{b}	39.11 ± 2.06^{b}
400	90.16± 1.07^{a}	66.05 ± 0.56^{a}	71.71 ± 3.25^{a}	85.36 ± 2.60^{a}	66.67 ± 1.09^{a}	59.04 ± 0.56^{a}
EC_{50} (µg/ml)	46.18	132.23	114.30	95.12	160.47	310.91
Regression equation	y = 19.53ln(x) - 24.88	y = 18.37ln(x) - 39.71	y = 19.91ln(x) - 44.31	y = 26.37ln(x) - 70.12	y = 19.94ln(x) - 51.28	y = 15.36ln(x) - 38.19
r	0.961	0.980	0.988	0.991	0.992	0.967
F-ratio	125.18*	155.21*	100.34*	106.01*	136.74*	102.67*
HSD	9.27	7.68	10.26	13.19	8.78	8.00

Significance level (*$p \leq 0.05$).
Values expressed as mean ± SE.
Means with different superscripts alphabets represent significantly different values.
Obhex (hexane fraction); *Obcl* (chloroform fraction); *Obea* (ethyl acetate fraction); *Obbu* (butanol fraction); *Obaq* (aqueous fraction)

Supplementary Table S2. Antioxidant activity of extract/fractions of *O. bracteata* in Lipid peroxidation assay.

Conc (µg/ml)	Scavenging (%)					
	Rutin	**Obhex**	**Obcl**	**Obea**	**Obbu**	**Obaq**
25	20.06 ±1.36^{e}	7.91 ± 1.14^{e}	11.38 ± 1.85^{d}	16.50 ± 2.10^{e}	9.79 ± 2.18^{d}	8.83 ± 1.75^{e}
50	39.12 ± 1.76^{d}	19.33 ± 2.23^{d}	19.33 ± 2.68^{d}	31.74 ± 2.78^{d}	16.28 ± 1.06^{d}	16.92 ± 0.99^{d}
100	59.28 ± 3.48^{c}	37.73 ± 4.22^{c}	39.05 ± 3.91^{c}	63.23 ± 2.80^{c}	38.74 ± 1.69^{c}	38.51 ± 1.62^{c}
200	75.09 ± 3.73^{b}	69.68 ± 1.54^{b}	68.73 ± 1.01^{b}	77.32 ± 2.32^{b}	58.55 ± 1.51^{b}	58.96 ± 1.32^{b}
400	89.88 ± 0.83^{a}	90.23 ± 0.44^{a}	90.55 ± 2.50^{a}	91.50 ± 1.04^{a}	92.30 ± 1.19^{a}	92.84 ± 0.95^{a}
EC_{50} (µg/ml)	76.77	117.52	114.31	80.67	125.79	127.03
Regression equation	y = 25.33ln(x) - 59.97	y = 31.01ln(x) - 97.84	y = 29.96ln(x) - 92.19	y = 28.21ln(x) - 73.88	y = 29.91ln(x) - 94.58	y = 30.02ln(x) - 95.40
r	0.997	0.987	0.983	0.988	0.976	0.975
F-ratio	121.80*	222.03*	167.18*	195.39*	450.18*	604.67*
HSD	11.75	10.76	12.03	10.43	7.37	6.38

Significance level (*$p \leq 0.05$).
Values expressed as mean ± SE.
Means with different superscripts alphabets represent significantly different values.
Obhex (hexane fraction); *Obcl* (chloroform fraction); *Obea* (ethyl acetate fraction); *Obbu* (butanol fraction); *Obaq* (aqueous fraction)

Supplementary Table S3. Cytotoxic effects of BDCe fraction on A549, IMR-32 and MG-63 cancer cell line in MTT assay.

Conc. (µM)	Percent Inhibition (BDCe fraction)			
	A549 Lung cancer cell line	***IMR-32 neuroblastoma cell line***	***MG-63 osteosarcoma cell line***	***HL-7702 normal human hepatocyte cell line***
15.625	28.99 ± 2.09^{d}	22.52 ± 1.71^{c}	30.07 ± 1.21^{d}	4.06 ± 0.30^{d}
31.25	38.40 ± 1.45^{c}	28.50 ± 1.87^{c}	42.27 ± 0.82^{c}	8.20 ± 0.68^{c}
62.5	49.77 ± 1.11^{b}	51.58 ± 0.36^{b}	60.75 ± 1.14^{b}	18.63 ± 0.9^{b}
125	76.71 ± 1.19^{a}	72.99 ± 0.90^{a}	82.23 ± 1.24^{a}	26.97 ± 0.60^{a}
Regression equation	$y = 22.39\ln(x) - 36.26$	$5.24\ln(x) - 51.61$	$y = 25.03\ln(x) - 40.73$	$y = 11.30\ln(x) - 28.25$
r	0.968	0.976	0.992	0.986
GI_{50} (µM)	47.12	56.05	37.53	1013.35
Camptothecin (GI_{50}) (µM)	53.37	64.34	52.80	74.84
F-ratio	186.15*	287.77*	412.29*	231.88*
HSD	6.85	6.16	5.07	3.07

Significance level (*$p \leq 0.05$).
Values expressed as mean ± SE.
Means with different superscripts alphabets represent significantly different values.

Supplementary Table S4. RT-qPCR primers sequence analysis.

S. No.	Primer Name [Acession No.]	Product Size	Oligonucleotides (5′-3′) sequence	Source
1.	p53 [NM_000546.5]	199	Forward-TCACTGAAGACCCAGGTCCA Reverse -TTGGCTGTCCCAGAATGCAA	NCBI
2.	Bcl-2 [NM_000633.2]	123	Forward-AGTCTGGGAATCGATCTGGA Reverse-GGCAACGATCCCATCAATCT	NCBI
3.	Cyclin E [NM_001238.3]	150	Forward- GGTATCAGTGGTGCGACATAG Reverse- CCAAGCTGTCTCTGTGGGTC	NCBI
4.	CDK2 [NM_001798]	180	Forward- GGCCCTATTCCCTGGAGATTC Reverse- CGTCCATCTTCATCCAGGGG	NCBI
5.	β-actin [T25383]	166	Forward- GTCCTCTCCCAAGTCACACA Reverse- GCTCATACATCTCAAGTTGGGAC	NCBI