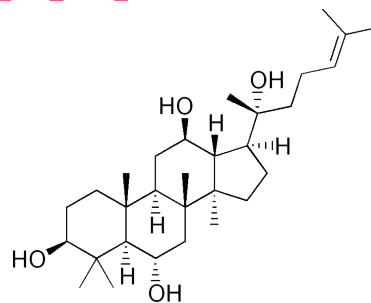




Dammarane Sapogenin PPT

Reduce Chemo Toxicity, Improve Quality of Life, Extend Patient Survival

Dammarane sapogenin PPT (protopanaxatriol) is extracted and purified from Asian ginseng, and its pharmacological effect is 5-10 times as potent as its precursors Rh1 and Rg1, respectively.



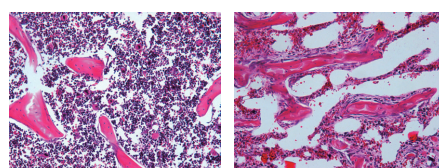
Molecular Structure of PPT

Facts of Cancer Treatments

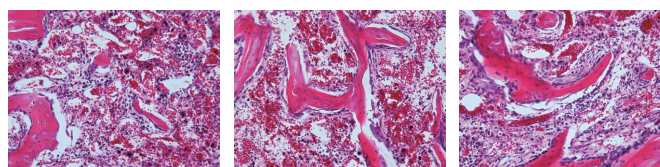
- >90% of chemo patients experiences severe toxicity;
- >50% of cancer patients die of chemo toxicity and its complications;
- >80% of cancer patients have poor quality of life.

Comprehensive studies from cell cultures, animal models and human trials prove that PPT not only possesses moderate anti-cancer activity and drug resistance reversal ability, but also: [1-5]

- Stimulates bone marrow proliferation in in-vitro cell culture, with an efficacy equivalent to G-CSF
- Reduces toxicities of chemo drugs like cisplatin and cyclophosphamide on bone marrow (leukopenia, thrombocytopenia), down to under 18%
- Resists Co60 radiation toxicity on bone marrow
- Boosts lymphocyte responsiveness after chemo- and radio-therapies
- Improves general health (body weight, food/water intake, etc) after chemo- and radio-therapies
- Ameliorates intractable bone pain due to bone metastasis
- Extends survival by >2-fold in 2/3 of patients
- Improves quality of life in 3/4 of patients



Normal Control Cyclophosphamide



37.5mg/kg 75mg/kg 150mg/kg

PPT

Figure 1 PPT significantly reduces cyclophosphamide toxicity on bone marrow, with increased cell density in PPT treatment groups with comparison to cyclophosphamide

Table. Patients response to PPT treatment

Case Number and Percent	Lung Cancer (36)	Breast Cancer (33)	Colon Cancer (27)	Renal Cancer (15)	Pancreatic Cancer (12)	Ovarian Cancer (12)	Others (29)	Brain Metastasis* (14)
>2-fold increase then predicted survival	23 (64%)	23 (70%)	21 (78%)	9 (60%)	9 (75%)	8 (67%)	20 (69%)	11 (79%)
Literature Recorded Mean Survival (LRMS)	8.1-8.9	13.7	9-12	6	10	37	-	3-4
>2-fold increase than LRMS	12 (33%)	11 (33%)	11 (41%)	3 (20%)	9 (75%)	7 (58%)	-	10 (71%)
Improved Symptoms and Quality of life	27 (75%)	26 (79%)	23 (85%)	11 (73%)	10 (83%)	10 (83%)	24 (83%)	12 (86%)

* Brain metastasis cases overlapped with other cancer cases grouped by primary sites.

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