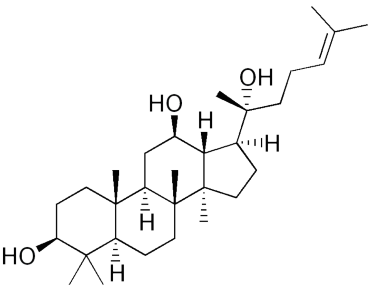
Dammarane Sapogenin PPD

Reduce Risk of Cancer Recurrence and Metastasis and Help Cancer Recovery

Dammarane Sapogenin (Protopanaxadiol/PPD) is extracted and purified from American Ginseng, and is considered to be one of most potent anti-cancer herbal ingredients. Its anti-cancer activity is 5-10 and >20 times as strong as its precursors Rh2 and Rg3, respectively.



Molecular Structure of PPD

>50% of cancer patients experience cancer recurrence or metastasis within 1 year after surgery; 90% of cancers produce multi-drug resistance during treatment.

Publications from world-renowned biomedical journals prove that PPD can:

- Inhibit cancer cell growth[1]
- Induce cancer cell differentiation toward normal morphology and behavior[2]
- Stimulate apoptosis of a variety of cancer cells (table 1)[1, 3]
- Activate cancer cell autophagy and self-destruction [4, 5]
- Remove multi-drug resistance of cancer cells[6, 7]
- Synergize various chemo drugs (table 2)[8, 9]
- Prevent new blood vessel development in tumor to reduce cancer growth and spread[10]
- Decrease tumor growth and extend survival in mouse models (figure 1)[11]
- Reduce or stabilize tumor (figure 2) in 77% of patients (table 3)

Table 1 PPD induces apoptosis of a various of cancer cells

PPD induces apoptosis of following cancer cells
Lung Cancer Cell (H-460、H-838、MS-1)
Pancreatic Cancer Cells (MIAPaCa-2、BXPC-3、Capan-1)
Breast Cancer Cells (MCF-7 adr、MCF-7 Vec、MCF-7wt、MCF-7 C3、MDA435LCC6M)
Glioma Cells (9L、U87 MG、U126、U138、U373、SF188、SF210)
Prostate Cancer Cells (PC3、LNCaP)
Colon Cancer Cell (HCT15)
Melanoma Cells (B16)
Lymphoma Cell (S180)

Table 2 PPD Synergism with Various Chemo Drugs

Chemo Drugs with Synergism with PPD	Tested Cancer Cells (>10-fold increase in chemo Drug Sensitivity)
Cisplatin	Lung Cancer Cell (MS-1)
Paclitaxel or Docetaxel	Lung Cancer Cell (MS-1); Pancreatic Cancer Cell (BXPC-3, Capan-1); Breast Cancer Cell (MCF7adr); Bladder Cancer Cell (LNCaP)
Gemzar	Pancreatic Cancer Cell (Capan-1, MIA PaCa-2)
Tamoxifen	Breast Cancer Cell (MCF7adr, MDA-MB231)
Mitoxantrone	Bladder Cancer Cell (LNCaP); Breast Cancer Cell (MCF-7/MX)
Adriamycin	Breast Cancer Cell (MCF-7); Oral Cancer Cell (KB/VCR)
Vincristine	Oral Cancer Cell (KB/VCR)

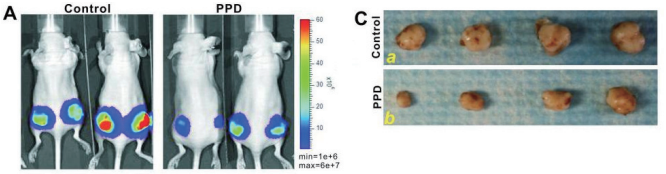
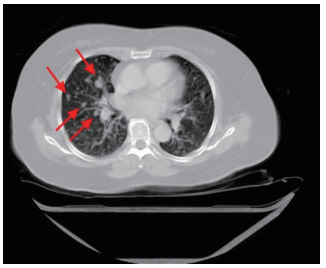
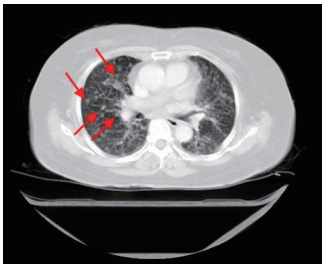


Table 3 Response to PPD Treatment

Treatment Response	PPD
PR+SD (Cancer Regression + Stabilization)	77%
PD (Progressive Disease)	23%



Lung Cancer: Before PPD Treatment



Lung Cancer: After PPD Treatment

Unique PPD manufacture and dripping pill Formulation technologies ensure high oral absorption and low rate of side effects. At the same oral dosage, PPD dripping pill achieves >50 times the therapeutic effect as other ginsenoside products (powder, tablet or capsule).

For more information, please visit www.ginsenosides.org.

References:

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