

A Report of Anti-cancer activity (In vitro) of herbal formulation-PHPC Compound

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ABSTRACT PHPC Compound is the patent and proprietary medicine developed by Benmoon Pharma Research Pvt Ltd., Ahmedabad. The entire study was planned to do evaluation of efficacy and safety of PHPC Compound in experimental animal's models. First it was screened in-vitro using breast cancer cell line using MTT assay method, wherein it has shown significant reduction in viable cancerous cells.

After promising result in in-vitro study, safety was checked using Acute toxicity study (OECD 425), wherein it was found safe till the dose of 2000-5000mg/kg, orally.

Further, for long term usage of this formulation, its sub-chronic (90 days) oral toxicity study was done (AYUSH & OECD 408 guideline) in rats and guinea pigs, wherein it shows no significant toxic sign, symptoms and in histology too. To check whether it retards toxic effects against chemotherapeutic agents induced toxicity, it was evaluated against 5-FU model, wherein also it has shown chemo-preventive activity.

To check its effectiveness against breast cancer, it was further screened against DMBA-induced

cancer model, wherein also it has shown significant reduction in occurrence of tumor, reduction in tumor size and volume. DMBA induced breast cancer by DNA mutation and increasing free radicals level. The treatment of PHPC Compound reduces free radical levels as evident by significant increase in SOD and Catalase level. Further, it reduces serum level of SGOT and SGPT level, which usually get secreted during tissue damage.

Further to check the effectiveness of the PHPC Compound on DNA damage in individual cells of cancer cell line. In the present study, in 5-FU (5.0µg/ml) treated cell line, there was reduction in % Head and increase in % Tail, which indicates DNA damage in L929 and MCF-7 cell line. Wherein in case of Test drug (20, 40 and 60 µg/ml) groups, there was significant increase in % Head and decrease in % Tail, which indicates that test drug provides chemo preventive effects. In brief, PHPC Compound has shown promising level of safety and efficacy in experimental animal models.

List of Pharmacological Activities Done for PHPC Compound Sr. No.	Type of Study	Experimental Model Used
1.	In-vitro anti-cancer study	MTT assay using breast cancer line
2.	Acute Toxicity Study	Acute Oral Toxicity study as per OECD 425 guideline
3.	Chemo- preventive Study	Protective effect of PHPC Compound against 5-FU induced toxicity study
4.	Sub chronic toxicity study	90 days oral toxicity study as per AYUSH and OECD 408 guideline.
5.	In- vivo Anti-cancer activity	DMBA induced breast cancer Model.

6.	Comet assay	Effect on cellular DNA damage
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Pre-clinical Safety & Efficacy Study of PHPC Compound

The purpose of the research study on cancer is to develop safe and effective methods to prevent, detect, diagnose, treat, and, ultimately, cure the collections of diseases we call cancer. Ideas for new cancer research studies are often inspired by findings from earlier research, research on other cancers, and even findings from research done on other diseases, such as diabetes or immune disorders. Its aim is to reduce the number of deaths from cancer.

The research reports that covers cytotoxicity study evaluated for cytotoxicity against human adenocarcinoma cell for performing Anti - Cancer Activity effect on cellular DNA damage with his research called PHPC Compound has shown significant reduction in occurrence of tumor, reduction in tumor size and volume, having conducting clinical researches, investigating methods of prevention, diagnosis & treatment studies for several years and have led Dr. Dinesh Kacha for this global recognition. The results revealed that the formulation showed significant cytotoxicity on cell line. Overall, the cell growth inhibition by the PHPC observed in this study synergistic response rates. In brief, PHPC

Compound has showing promising level of results in experimental models.

Researches & Studies

A Report Of Anti-cancer activity (In vitro) of herbal formulation-PHPC Compound

A Report Of Acute Oral Toxicity Study Of PHPC Compound

To evaluate protective effect of in 5-fluorouracil (5 FU) induced toxicity

A Report Of Sub-chronic (90-days) Oral Toxicity Study of PHPC Compound

A Report of Study of PHPC Compound in 7,12-Dimethylbenz(a)anthracene induced Breast cancer Evaluation of effect of formulation "PHPC Compound" on cellular DNA damage

Protective effect of PHPC Compound against 5-FU induced toxicity study

OBJECTIVE

To study the anti cancer activity of Polyherbal formulation PHPC Compound.

SCOPE

The scope covers cytotoxicity study by using MTT assay on MCF-7 human breast cancer.