



### Industrial Consultancy & Sponsored Research (IC&SR)

#### Cancer Chemopreventive Formulation of PM 002 / Broad Spectrum Anticancer Formulation Of PM 002

#### IITM Technology Available for Licensing

##### Problem Statement

- Cancer chemotherapy, which involves the use of **drugs to inhibit or kill cancer cells** utilizes natural products as **anticancer drugs source**.
- While several plant compounds classes are explored for their chemotherapeutic potential, aromatic plant extract is not extensively studied.
- With the demand for **safer cancer treatments** on the rise, there is a **crucial need** to explore **new sources of therapeutic compounds**.
- A readily available natural resource with diverse biological activity: **Pamburus missionis** is a promising option. So, this invention is disclosed.

##### Technology Category/ Market

###### Drug & Pharmaceutical Engineering

**Industry:** Pharma & Herbal Medicine Industry

**Application:** Chemotherapy, Herbal Medicine Development, Cancer Treatment

**Market:** The global cancer therapeutics market size is expected to be worth around **US\$ 393.61 Billion by 2032** from at **US\$ 164 Billion in 2022**, growing at **9.20% CAGR** during the forecast period **2023 to 2032**.

##### Technology

The instant invention discloses a **method of preparation** of a chemotherapeutic formulation from **Pamburus missionis (Wight) Swingle extract**, comprising:

- **Passing steam at 75-95°C** over fresh leaves of Pamburus missionis (Wight) Swingle for **3-10 hours** to obtain a distillate;
- **Recovering the extract** from the distillate using **solvent extraction method**;
- **Mixing** with physiologically acceptable carrier to obtain the formulation.

Cytotoxic activity of Pamburus missionis essential oil/extract of **FIG. 1A** human adenocarcinoma cell lines; **FIG. 1B** on human leukemia cell lines.

##### Intellectual Property

IITM IDF No: **1200** | IN IP No: **414895(Granted)**

##### Research Lab

**Prof. Rama S Verma**, Dept of Biotechnology

##### TRL (Technology Readiness Level)

**TRL - 4, Experimentally validated in lab.**

##### Key Features / Value Proposition

- Effective treatment option for **solid & leukemic cancers**. Natural & plant-based formulation, potentially appealing to those seeking alternative or complementary therapies. Minimal toxicity to non-cancerous cells, reducing side effects.
- Opportunity for pharmaceutical companies to develop and market a **novel cancer treatment** derived from natural sources.
- Utilization of sustainable and eco-friendly extraction methods aligning with consumer preferences for green products.
- **Extraction method yields** a potent blend of sesquiterpenes, oxygenated sesquiterpenes, monoterpenes, ketones, and aldehydes, known for their **anticancer properties**.
- Formulation can be tailored into various pharma formats for ease of administration.
- **Demonstrated cytotoxic activity** against cancer cells at low dosages, indicating high efficacy.

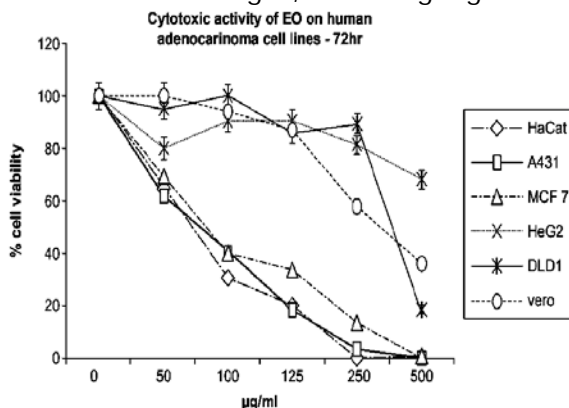


FIG. 1A

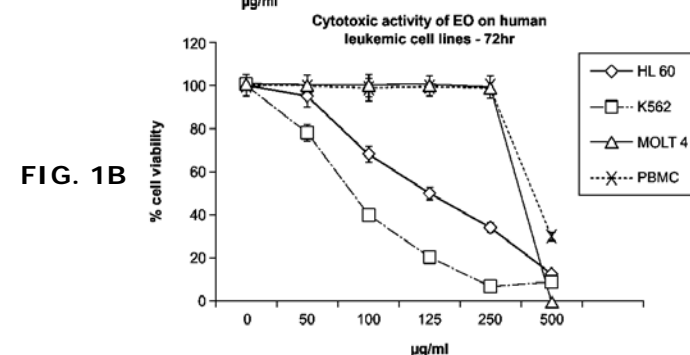


FIG. 1B

##### CONTACT US

**Dr. Dara Ajay**, Head

Technology Transfer Office,  
IPM Cell- IC&SR, IIT Madras

**IITM TTO Website:**

<https://ipm.icsr.in/ipm/>

**Email:** [smipm-icsr@icsrpis.iitm.ac.in](mailto:smipm-icsr@icsrpis.iitm.ac.in)

[sm-marketing@iitmadras.ac.in](mailto:sm-marketing@iitmadras.ac.in)

**Phone:** +91-44-2257 9756/ 9719