

National Institute of Malaria Research (NIMR), Delhi

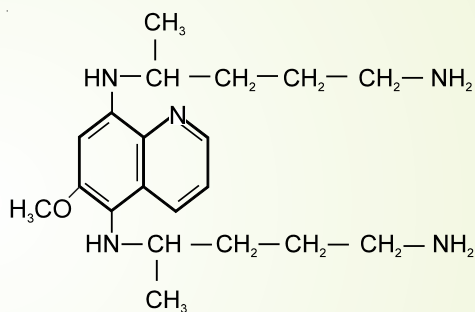
Formulation for Malarial Treatment

Product/Process: New drug formulation for malaria.

Application/Uses: This new formulation is used for treatment of malaria as gametocidal and schizontocidal drug.

Salient Technical Features:

Primaquine has been conventionally employed for relapsing *Plasmodium vivax* malaria and for gametocidal action in *P. falciparum* malaria for a long time. However, the drug is toxic particularly in patients deficient in glucose-6-phosphate dehydrogenase (G6PD). The present drug formulation helps treat malaria without any side effects.



Scale of Development: This treatment has been developed up to laboratory scale. The drug formula has been tested for *in vivo* study in infected mice/hamster before and after treatment with the new drug. This observation was further assessed by feeding *A. stephensis* mosquitoes on *P. voelli* infected mice/hamster before and after treatment. Complete loss of infectivity in mice after treatment has been noticed.

Status of Commercialization: An Indian patent (no. 189970) has been granted.

Herbal Composition for Mosquito Control

Product//Process: Composition containing *Solanum nigrum* extract.

Application/Uses: This herbal composition is used as larvicidal agent for controlling mosquitoes.

Salient Technical Features: This composition which comprises fruit extract of *Solanum nigrum* in hexane solvent was found to be 13 fold more efficacious than aqueous extract.

Scale of Development: The technology has been developed up to laboratory scale. A patent (Application no. 1195/DEL) has been filed at Indian Patent Office.

Status of Commercialization: Technology commercialization is being explored.

A Plant Based Insecticide for Mosquito

Product/Process: The invention relates to insecticide isolated from plant *Valeriana jatamansi* against major vectors of malaria, filaria and dengue.

Application/Uses: The fraction isolated from plant possesses very good adulticidal activities against common vectors of malaria, filaria and dengue viz. *Anopheles stephensis*, *Anopheles culcifacies*, *Aedes aegypti* and *Culex quinquefasciatus*. These fractions also possess larvicidal activity.



Salient Technical Features: *Valeriana jatamansi* is a common plant distributed in mountains and Himalayas from Kashmir to Bhutan and has been used for its calming, relaxing and emotionally balancing influences. A purified fraction of this plant possesses good insecticidal properties against mosquitoes. Adulticidal activity of this plant against major vectors of dengue, malaria and filaria has been demonstrated determined by WHO method on impregnated papers of two fractions (MRCHAR/03/05/S and MRCHAR/03/05/C).

Scale of Development: The technology has been developed up to laboratory scale.

Status of Commercialization: An Indian Patent (Application no. 3234/DEL/2005) has been filed.

Immunodiagnostic reagent

Product/Process/ Process: Hybridoma cell line producing antibody against *Plasmodium vivax*.

Application/Uses: This monoclonal antibody is specific for *P.vivax* and is useful for detection of *P.vivax* antigen in patient's blood.

Salient technical feature:

- It is based on immunodiagnostic antibody probe for detection of *P.vivax* antigen.
- The monoclonal antibody is unique.

- The fusion of spleen cells takes place with mouse myeloma cells.
- After fusion, the cell was cultured and then cloned.

Level/Scale of Development: The technology has been developed up to laboratory scale.

Status of Commercialization: An Indian patent (Application no. 1606/DEL/2008) has been filed.

A botanical formulation for mosquito control

Product/Process: A new plant based insecticide for the control of Malaria, Filarial and Dengue.

Application/Uses: The plant is used as insecticide and exhibit very good adulticidal activity against *Anopheles culicifacies*, *A. fluviatilis*, *Aedes aegypti*, and *Culex quinquefasciatus*.

Salient technical features:

- The fraction code MRCHR 04/04/S was isolated from *Lantana camara* is utilized.
- The yield of the fraction is 0.4%.
- The isolated fraction showed good adulticidal activity and may be stored at low temperature.



Level/Scale of Development:

The technology has been developed up to laboratory scale.

Status of Commercialization: An Indian patent (Application no. 2405/DEL/2007) has been filed.