

NEHRU GRAM BHARATI

(Deemed to be University)



Green House Project

Botanical Garden, Dept. of Botany

Introduction

There is a large and increasing global burden of disease. Ischemic heart disease is a major non communicable disease which has become an important problem worldwide. Acute myocardial infarction (MI) is the most alarming one among ischemic heart diseases and it occurs due to imbalance between coronary blood supply and myocardial demand. Cardio-protection includes all mechanism and means that contribute to the preservation of the heart by reducing or even preventing Myocardial damage. Cardiovascular disease (CVD) remains the principle cause of death in both developed and developing countries including India. Therefore, finding ways to reduce the mortality of cardiovascular disease remains an important health goal. Thus the ministry of DBT, DST, ICMR and other abroad funding agency related to the human health go thoroughly.

Brief Outline: The use of plants as medicine is times immemorial. Apart from serving as food they have extensively been used for their therapeutic values to cure various ailments. Of about 250,000 higher plant species on earth, more than 80,000 species have been identified as therapeutically important (Joy. P.P, 2001). Drugs originating from plants are being used in traditional systems of medicines such as Unani and Ayurveda. These plant originated drugs show biological functions, mediating their effects on human body with similar mechanism as done by the chemical compounds found in conventional drugs. With the realization of harmful side effects of conventional drugs and an arising awareness of the relationship between herbs and other natural compounds and diseases there is increasing demand of herbal therapies for curing them. Through normal metabolic activities, plants produce many chemical compounds classified as primary metabolites (like sugars and fats) and secondary metabolites. The medicinal plants are potential sources of drugs as they are rich in secondary metabolites and essential oils of therapeutic importance. The secondary metabolites such as alkaloids, terpenoids, carotenes etc. show disease protective, analgesic, antibacterial, anticancerous, anti-asthma, anti- hypertension, antimalarial and antioxidant properties and can be refined to produce drugs showing therapeutic actions. Because of these advantages the use of medicinal plants has been widely increased by the traditional medical practitioners in their day to day practice.

More than 2000 plants have been listed in the Traditional (Herbal/Alternative) systems of medicine. Some of these are providing comprehensive relief to the people suffering from cardio-vascular diseases, specially "hyperlipidemia" and "ischemic heart disease". Many dietary plants and food antioxidants are increasingly being recognized as health promoter in heart diseases WHO reports indicate that around eighty percent of the global population still relies on botanical drugs and several herbal medicines have advanced to clinical use in modern times. The use of Western medicinal drugs for the treatment of hypertension, congestive heart failure and post myocardial infarction are widely accepted.

In suggested research work we are proposing to evaluate crude extracts of selected disease protective medicinal plants already mentioned in Ayurveda and characterize their disease protective activities.

Expected outcome in physical terms (as applicable)

a) Specifications of sub system/system (as applicable)

Synthetic Biology, Human Health

b) Any new/superior Methodology Expected.

Yes

c) Manpower trained

Yes



Green House 1



Green House 2: Inner View



Green House 3: Inner View



Green House 4: Inner View



Green House 5: Inner View

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