

COMSATS' Thematic Group on Natural Products Sciences

Annual Activity Report (2012-13)

During the report period, COMSATS Thematic Group on Natural Products Sciences has been involved in planning/organisation of two joint meetings.

COMSATS' Thematic Group on Natural Products Sciences Annual Activity Report (2012-13)

A joint training Workshop entitled, “ **An International Workshop on “Plant Products Chemistry” and International Symposium on Medicinal-Aromatic Plants**”, during 3-7 June, 2013,

jointly organized by COMSATS Thematic Group on Natural Products Sciences, Ege University, Izmir, Turkey, and International Center for Chemical and Biological Sciences, University of Karachi, Pakistan.

This workshop is planned to be held in Izmir, Turkey (<http://www.ppcw2013.com>).

COMSATS' Thematic Group on Natural Products Sciences Annual Activity Report (2012-13)

International Training Workshop on “Concept and Applications of NMR Spectroscopy in Natural Product Sciences” , (2-3 June 2013)

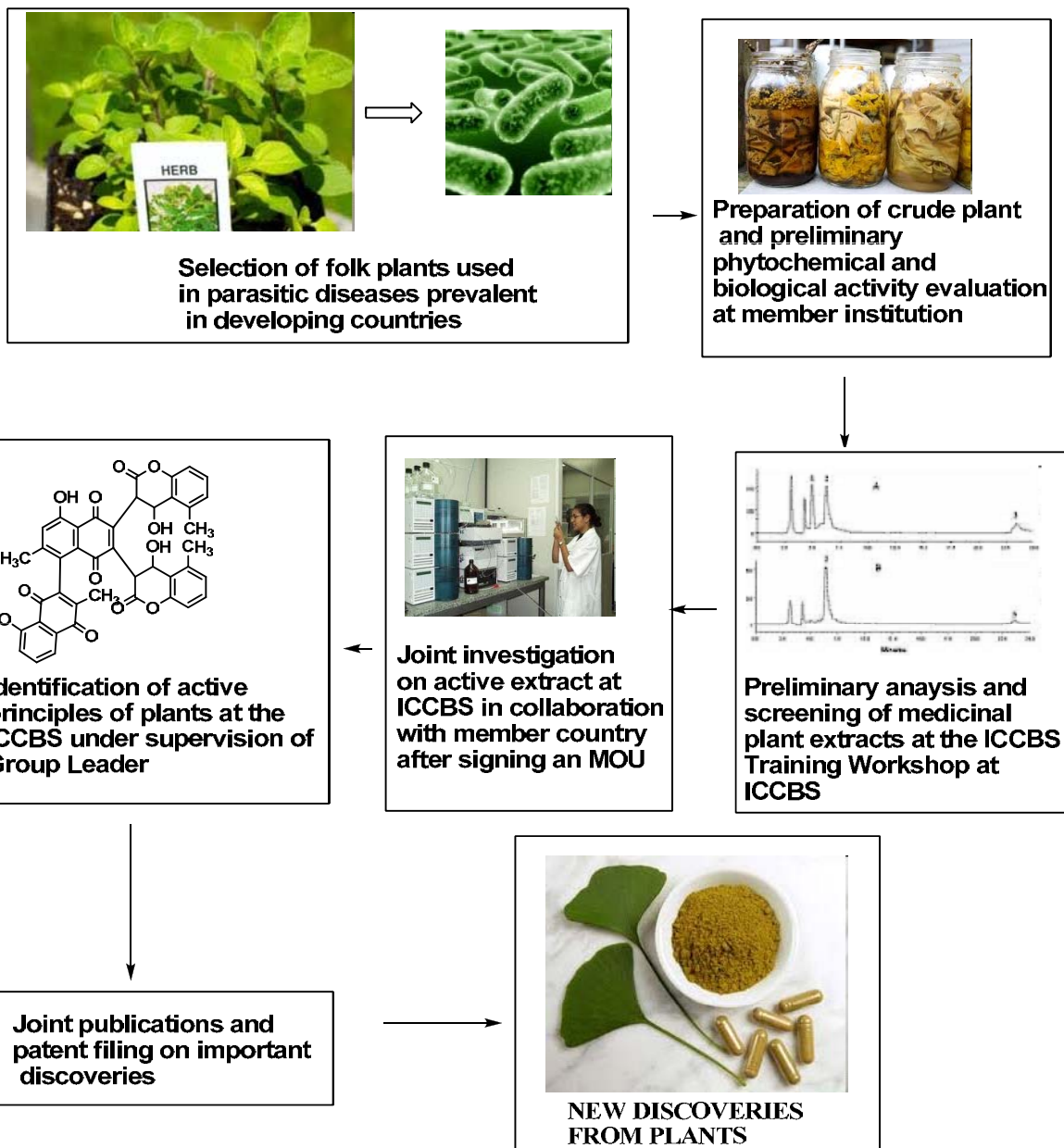
- **Workshop will provide practical guidance in structure elucidation of natural products using spectral techniques particularly Nuclear Magnetic Resonance (NMR).**
- **An overview of NMR will be covered in the theoretic lectures, and problem-solving sessions will provide the participants with practical spectral interpretation knowledge for structural determination.**
- **The two-day intensive workshop will promotes open discussion of concepts, and emphasis will be given to spectral applications in natural product chemistry.**

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International Seminar/Workshop on Sustainable Utilization of Natural Products for Human Health and Well Being August 25-27, 2013, Iran

- The proposed conference will be jointly organized by the COMSATS Thematic Group on Natural Products and IROST.
- The three day international conference will have participation from at least 15 COMSATS member countries.
- The focus of the conference will be on the sustainable utilization of natural products for health and well being.
- The conference will cover topics such as ethnobotany, natural product chemistry, biotechnology of medicinal plants, pharmacology, clinical trials, safety and efficacy and standardization.

JOINT INVESTIGATIONS ON MEDICINAL PLANTS IN SEARCH OF NEW REMEDIES FOR DEVELOPING COUNTRIES



**Proposal of Joint Research Project Entitled,
“Drug Discovery from Nature for Neglected
Diseases”**

Submitted by

**COMSATS Thematic Group on Natural Products
Sciences**

- **Participating Member Countries:
Egypt, Nigeria, Pakistan, Sudan, Turkey, and
Bangladesh.**

Drug Discovery from Nature for Neglected Diseases

- **Neglected tropical diseases are major health concern in developing countries of the world.**
- **Most of neglected tropical diseases seriously affect almost exclusively poor population living in developing countries.**
- **Many neglected tropical diseases are caused by parasites, which are spread by insects vectors or contact with contaminated water or soil.**

Drug Discovery from Nature for Neglected Diseases

- Over one billion people are the victims of parasitic disease including malaria.
- Unfortunately there is serious lack of interest in the research and control of these diseases.
- Most of the multinational pharmaceutical companies are not interested in developing drugs against such tropical diseases. Since investment on control of these diseases is considered to be non profitable.

Drug Discovery from Nature for Neglected Diseases

Therefore, there is an urgent need to develop new drugs and vaccines that are adapted to developing countries' needs, and to make them available at affordable prices for common people.

OBJECTIVES:

- **To explore the wealth of medicinal plants of developing countries for the discovery new bioactive compounds against parasitic diseases .**
- **To develop a strategy to become self-sufficient in their health needs.**
- **To develop research collaboration in COMSATS member countries in the field of natural products sciences by addressing common health problems.**
- **To train highly qualified human resources in the field of natural products-based drug discovery to combat tropical diseases in this region.**
- **To highlight the enabling role of COMSATS in bringing scientists and institutions together and engaging them in meaningful research endeavors.**

Year-Wise Plan of Work

<i>Time Schedule</i>	<i>Pakistani responsibilities</i>	Member Institution responsibilities
<i>1st Year</i>	Preliminary analysis and Screening of crude extracts of identified plants at ICCBS in relevant bioassays. Compilation and Sharing of biological results with member Institutions	Collection and preparation of some lesser-known plant species used in the treatment of malaria and other parasitic diseases
<i>2nd Year</i>	Determination of structures, and anti-parasitic activities of pure compounds and their toxicological studies. Report and joint Patent filing on important discoveries made under this project	After signing a memorandum of understanding between the member institutions and ICCBS, Training visits of researchers from member institution.

Due to non-availability of funds, no research work could be initiated

Thank You Very Much