

## Research in clinical phytopharmacology to develop health care in developing countries: State of the art and perspectives

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### Abstract

Medicinal plants are used worldwide as an alternative and/or a complementary medicine. Likewise, an interest in medicinal herbs is increasing as a precursor of pharmacological actives. Research in clinical phytopharmacology is as an alternative to develop healthcare in developing countries. The most advanced nations of the Western Hemisphere have adopted biologics and biosimilars medicine. Clinical phytopharmacology deals with all aspects of the relationship between phytomedicines and humans. The role of a clinical phytopharmacology is to develop methods and strategies that improve the quality of phytomedicine. This document is aimed primarily at decision-makers in a variety of topics in phytopharmacology research, including the development of methods and strategies that improve the quality of phytomedicine use in individual patients and patient populations. The first part of the document is related to the extraction of active principles for candidate phytomedicines selection. Following, there is preformulation of active principles for preclinical studies using polyphytotherapy alternative and combination concept. The second part of the document deals with phytopharmacy and methods to optimize production of raw materials followed by clinical evaluation. The last part of the document is concerned with phytomedicine use, problems of drugs interaction, pharmacovigilance and pharmacoeconomics. We hope that, this document will realize the great benefits that pharmacologists can bring to develop a good quality of phytomedicines

**Keywords:** Clinical Phytopharmacology, Polyphytotherapy, Phytomedicine, Health care

### 1. Introduction

Medicinal plants are used worldwide, especially in undeveloped nations. More than 80% of populations in these countries use herbal products to treat many diseases. However, the technological application to transform plants from their raw material state to medicines in commercial dosage forms such as tablets, powders or syrups, etc, remain unchanged since 1960.