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Venue: NSIC Exhibition Complex, Okhla Industrial Estate, New Delhi. 14 – 15 April, 2012

Invited Guest talk:

Current Scenario of Ayurveda and Traditional Medicine in Sri Lanka

Pathirage Kamal Perera<sup>1\*</sup>

**Abstract**

Traditional medicine has been practiced in Sri Lanka for 3,000 years. At present, there are four systems of traditional medical systems in Sri Lanka viz. Ayurveda, Siddha, Unani and Deshiya Chikitsa (Sri Lankan traditional treatment). The most important among them is Ayurveda, which also forms part of the National Health Services provided by the Government of Sri Lanka, which includes a separate ministry for Indigenous Medicine. At present, Ayurveda serves a large proportion of the population with one Ayurvedic physician per 3,000 people in Sri Lanka. About 60% to 70% of the rural population relies on traditional and natural medicine for their primary health care; accordingly Herbal drugs are essential components of the Traditional Medical System in Sri Lanka. Sri Lanka is identified as one of the most biologically diverse countries in Asia, with about 20% of the area under forest. It has the highest species diversity per unit area in Asia, and is one of the mega biodiversity hot spots. Therefore it is an aspect of the health care system to rationally utilize medicinal plants for curative purposes, and with proper maintenance of biodiversity. The Government of Sri Lanka has taken several initiatives to develop technology for the effective conservation, and efficient utilization, of medicinal plants; accordingly research and developmental activities are coordinated through the Department of Ayurveda, Bandaranayake Memorial Ayurvedic Research Institute, and the Institute of Indigenous Medicine – University of Colombo. However due to lack of funding, and some problems and constraints concerning the dissemination of knowledge about herbal medical systems and its applications to cure illnesses, has not been effectively promoted by Sri Lanka. If this was to happen successfully, Sri Lanka could gain a very significant competitive edge in the global market, especially in the herbal medical drugs, beauty care, and nutraceuticals industries. There is considerable scope for Sri Lanka to achieve a higher rank in global markets, through exports of quality products from medicinal and aromatic plants. Unfortunately Sri Lanka seems to be lagging behind in the advancement of technology and standardization procedures in herbal products; accordingly it is ranked lower in the herbal medicine global market share, while China (for example) occupies nearly 30% of this global market. Therefore Sri Lanka needs to focus on quality assurance with multidisciplinary researches within the country and collaborative works with other high tech user countries. Furthermore, good laboratory practices (GLP) and good manufacturing practices (GMPs) are also needed to promote good quality medicinal products in Sri Lanka. Without overcoming these obstacles, the current scenario is not sufficient to increase the global market share of herbal drug industry and herbal medical practice for Sri Lanka.

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## Introduction

Sri Lanka is identified as one of the most biologically diverse countries in Asia, with about 20% of the area under forest. It has the highest species diversity per unit area in Asia, and is one of the mega biodiversity hot spots. Therefore it is an aspect of the health care system to rationally utilize medicinal plants for curative purposes, and with proper maintenance of biodiversity. The Government of Sri Lanka has taken several initiatives to develop technology for the effective conservation, and efficient utilization, of medicinal plants; accordingly research and developmental activities are coordinated through the Department of Ayurveda, Bandaranayake Memorial Ayurvedic Research Institute, and the Institute of Indigenous Medicine, University of Colombo and many other stakeholders (Figure1).



Figure 1: Stake holder in herbal medicine

Assessment of the safety of herbal products is the first priority in herbal research. There are various approaches to the evaluation of safety of herbal medicines. The toxic effects of herbal

preparation may be attributed mainly to the inherent toxicity of plant constituents and ingredients and manufacturing malpractice and contamination. Evaluation of the toxic effects of plant constituents of herbal formulation requires detailed phytochemical and pharmacological studies. It is, however, safe to assume that, based on human experiences in various cultures, the use of toxic plant ingredients has already been largely eliminated and recent reports of toxicity could largely be due to misidentification and overdosing of certain constituents. Potential contaminants of herbal medicines include microorganisms, microbial toxins, pesticides, fumigation agents, radioactivity, and the presence of toxic compounds of toxic metals (1, 2, 3, and 4). Some of these contaminants have been identified by the Committee for Proprietary Medicinal Products (CPMP) of the European Community (EC) for use in controlling the purity of herbal medications in the European Union (EU) (5). The CPMP Guidelines highlight the need for good control of starting materials and the finished product and emphasize the importance of good manufacturing practices.

## Key challenges

When SWOT analyzing (Figure 2) there are many key challenge is to objectively assess conflicting toxicological, clinical, and other data and the verification of herbal materials used. This requires use of the audit process to identify potential contaminants in herbal products. Following are main risk areas Sri Lanka should be addressed;

Communication of uncertainty

Pharmacovigilance

Understanding why addition of harmful additives works

Evaluating “drug” interactions

GMP/GAP not implementation for herbal sector

Constraints with clinical trials and resource available.

mortality, reduced pain or discomfort, improved appetite and weight gain, reduction of blood pressure, reduction

of tumor size or extent, and improved quality of life. Laboratory/other diagnostic outcomes include parameters such as reduction of blood glucose,

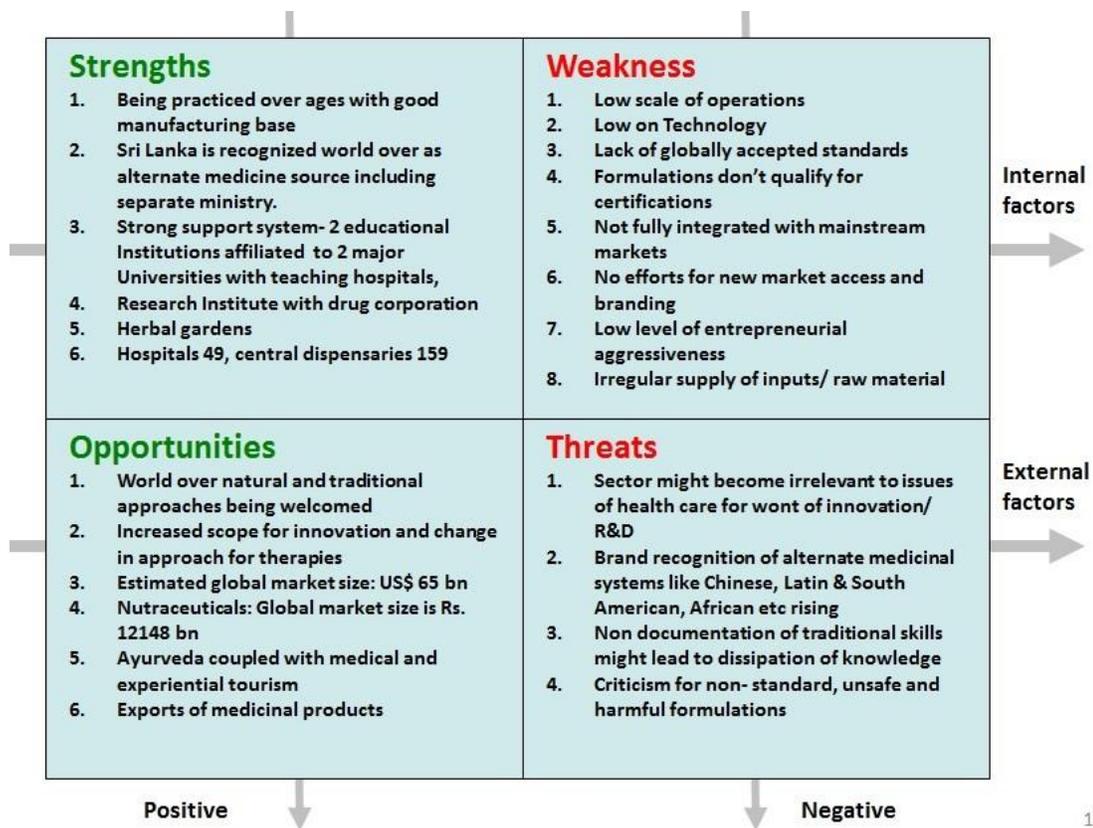


Figure 2: SWOT analysis of herbal product and traditional medicine sector in Sri Lanka

Herbal medicines are inherently different from conventional pharmacological treatments, but presently there is no way to assess their efficacy other than by currently used conventional clinical trial methodologies, in which efficacy is conventionally assessed by clinical, laboratory, or diagnostic outcomes. Clinical outcomes include parameters such as improved morbidity and

improvement of hemoglobin status, reduction of opacity as measured by radiological or imaging techniques, and improvement in electrocardiogram (ECG) findings. Usually the following tools are applied for testing the efficacy of drugs: (a) anecdotal reports, (b) case reports, (c) case series, and (d) randomized clinical trials (6).

## **How to overcome developmental issues in traditional medicine**

Government should positively support by giving more funds for herbal products researches and motivate private market sector including commercial cultivation of herbs and aromatic plants. Sri Lanka need to be focused on the quality assurance with multidisciplinary researches with in the country and collaborative works with other high tech used countries. Good laboratory practices (GLP) and Good manufacturing practices (GMPs) are also needed to apply for produce good quality medicinal products in Sri Lanka. Without overcoming these entire measures current scenario is not sufficient to increase the global market share of a herbal drug industry and herbal medical practice for Sri Lanka.

### **Conclusion**

Therefore Sri Lanka needs to focus on quality assurance with multidisciplinary researches with in the country and collaborative works with other high tech user countries. Furthermore, good laboratory practices (GLP) and good manufacturing practices (GMPs) are also needed to promote good quality medicinal products in Sri Lanka. Without overcoming these obstacles, the current scenario is not sufficient to increase the global market share of herbal drug industry and herbal medical practice for Sri Lanka.

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