



A REVIEW ON: “INTERNATIONAL AND LOCAL MARKET SIZE OF HERBAL MEDICINES”

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ABSTRACT: In the present article, an endeavor has been made to present an overview of contribution of herbal drugs to global market from various countries. Herbal medicinal products are getting global importance because of their health benefits. Their demand is going to increase because of increased and domestic interest of consumers in natural products as they are considered safer and more cost effective than synthetic drugs in many occasions. According to World Health Organization (WHO) about 80% population of most developing countries still rely on traditional herbal medicines for their primary health care needs. Overall international trade in medicinal plants and their products was US\$ 60 billion in 2010. And is expected to reach US\$ 5 trillion by 2050. In Asia, the demand of herbal market had almost doubled during late 1990's due to increase in population. Global Nutraceuticals Market has been projected to rise at over 8.3% per annum to reach US\$ 30 billion in 2015. A large number of food and pharmaceutical companies are active in the field because they consider that the nutraceuticals market has promising growth potential. This shows

that there is tremendous demand for herbal products and there is need to maintain standardization of herbal products for its toxicity due to heavy metals, excessive or banned pesticides, and microbial contaminants, chemical toxins produced due to unfavorable storage, improper storage as well as unfavorable storage conditions.

KEYWORDS: Phytopharmaceutical, nutraceuticals, AYUSH, Traditional Medicines.

INTRODUCTION

India has the world's oldest and largest traditional system of medicine. Indian system of medicine includes various systems such as Ayurveda, Siddha, Unani, Homeopathy, Yoga and Naturopathy. Indian herbal market is one of the growing markets because government set up herbal farm clusters for improving quality of drugs and promotion of exports, cultivation of medicinal plants and effective marketing of herbal products. Herbal medicinal products are getting global importance because of their health benefits. Their demand is going to increase because of increased interest of consumers in natural products as they are considered safer and more cost effective than synthetic drugs in many cases (Kochhar, 1981). Similarly, industry demand for herbal products was also increased due to emergence of new products like health foods, natural cosmetics, and hygiene products. Overall, international trade in medicinal plants and their products was US\$ 60 billion in the year 2000, with average annual growth rate of 7% and was expected to reach US\$ 5 trillion by 2050 (Govt. of India, 2000). China and India are the top exporting countries and Hong Kong, Japan, USA and Germany are the leading importers. Medicinal plant plays a vital role in the health care needs of three quarter of the world's population living in developing countries. Use of medicinal plants is being steadily increased.

WORLD PHYTOPHARMACEUTICAL MARKET

The interest of pharmaceutical industries towards medicinal plants is increased in last two decades. In USA, 25% prescriptions are dispensed with drugs whose active ingredients are derived from plants. Sale of plant-based drugs in USA amounted to around US\$ 4.5 billion in 1980 and US\$ 15.5 billion in 1990 (Farnsworth and Soejarto, 1985). As a result of this, 119 drugs were obtained from 90 plants in 1995 (Farnsworth et al., 1985) and over 130 in 1997 (Sukhdev, 1997). Due to such increasing demand of natural product it was expected that the share of plant derived prescription drugs would be increased up to 30% in nearby time (Wilkinson, 2000). More than 60 million U.S. consumers took herbal remedies (Austin, 2010). Glycosides were the next in sale to terpenoids. Flavonoids, saponins, anthraquinones and digitalis compounds were among the most significant categories in term of sale.

USE OF TRADITIONAL MEDICINES IN VARIOUS COUNTRIES

The annual turnover of the Indian herbal medicinal industry is about Rs. 7,500 crores against the pharmaceutical industry's turnover of Rs. 14,500 crores with a growth rate of more than 15%. The apex chamber estimates global herbal industry to grow to Rs. 70,000 crores by 2015, more than double from the current level of Rs. 30,000 crores. In India, there are about 14 well-recognized., 86 medium scale and 8000 small scale manufactures of herbal drugs on record. The estimated current annual production of herbal drugs is around Rs. 3500 crores. India with its strong base in traditional knowledge on herbal medicine and vast plant biodiversity has a great potential in this sector. Thus, the huge demand of herbal medicines has led to a sudden increase in herbal manufacturing units. This can be corroborated from the huge requirement of raw materials by the industry. The turnover of AYUSH industry is estimated to be more than Rs. 8800 crores in the year 2020. The domestic market of Indian systems of medicine & Homoeopathy (ISM&H) is of the order of Rs. 4000 crores with a total consumption of all botanicals to a figure of 177000 MT, which is expanding day by day. The total annual turnover of the Ayurvedic drug manufacturing industry is estimated to be around Rs. 3,500 crores. Some of the well-known industrial houses with individual annual turnover of more than 50 Crores are Dabur India Ltd, Zandu Pharmaceutical Work Ltd., Himalaya Drug Company, Shree Baidya Nath Ayurveda Bhawan Pvt. Ltd., Arya Vaidya Shala etc. The total quantity of exported medicinal plants from India including plant extracts was 57880 MT in the year 2008. The total value of plant raw drugs exported (excluding extracts) was Rs. 354.8 crores corresponding to a quantity of 56,500 MT in the year 2008. In 2008, the annual export of India's herbal sector added to Rs. 807 crores. This included exports worth Rs. 354.80 crores relating to plant raw drugs, Rs. 161 crores relating to plant extracts and Rs. 291 crores to medicines. Total 40 numbers of commodities were enlisted for import. The consolidated figures of such imports amounted to 37,483 MT (Rs.173 crores) and Gum Arabic constituted the largest proportion by quantity (12,731 MT; 34 %). India was second only to China in the world in the exports of Aayush and herbals of the total Rs.14000 crore in 2012. If one looks in terms of net value addition, the Aayush and herbal sector had shown a growth of 10.89% during 13 years period between 1995-96 and 2007-08.

MARKET OF HERBAL DIETARY SUPPLEMENTS IN THE UNITED STATES

Sales of herbal dietary supplements in the United States was increased by 4.5% in 2011, reaching a total estimated figure of nearly \$5.3 billion (USD). Sales in the mainstream market channel was continued to grow, increasing almost 3% over 2010 sales while sales in natural food stores rose by a strong 5.5%. The 5 top-selling herbal supplements of 2011 in the health and natural foods channel, according to SPINS newsletter, were flaxseed oil, wheat and barley, turmeric, aloe, and milk thistle. The top-selling herbal singles of 2011 in the food, drug, and mass- market channel, according to Symphony IRI, were cranberry, soy, saw palmetto, garlic, and ginkgo.

Table no.1: Acquisitions of European phytomedicine companies by multinational pharmaceutical companies' biloba

| Sr. No. | Multinational Company | Herbal companies acquired, Country |
|---------|---------------------------|--------------------------------------|
| 1. | American home products | Dr. Much, Germany |
| 2. | Boehringer Ingelheim | Pharmaton, Switzerland Quest, Canada |
| 3. | Boots | Kanold, Germany |
| 4. | Bausch & Lomb | Dr. Munn, Germany |
| 5. | Degussa | Asta Medica, Germany |
| 6. | Fujisawa | Klinge, Germany |
| 7. | Johnson & Johnson / Merck | Woelm Pharma, Germany |
| 8. | Pfizer | Mack, Germany |
| 9. | Rhone Poulenc Rohrer | Natterman, Germany |
| 10. | Sanofi | Plant Organ, Germany |
| 11. | Searle | Heumann, Germany |
| 12. | SmithKline Beecham | Fink, Germany |
| 13. | Solvay | Kali Chemie, Germany |

DEVELOPMENTS IN HERBAL MEDICINE INDUSTRY

The majority of leading companies, specialized in herbal drugs, are located in Germany, France, Italy and Switzerland. Some of them are over 100 years old and many are still privately owned. Some multinational pharmaceutical companies have bought smaller herbal companies in Europe (Table 1). Examples are Boehringer Ingelheim (Sweden), Lederle (Australia) and Schering (Belgium and Hungary). Herbals are the fastest growing segment in the raw materials market in the USA, valued at over US\$ 600 million.

NUTRACEUTICALS

'Nutraceuticals' is a latest term for health foods, The term 'nutraceuticals' is an amalgamation of the term 'nutrition' and 'pharmaceuticals' used as a marking level to distinguish certain foods and food ingredients, usually from natural sources, which confer specific health benefits. Nutraceuticals are the latest products in a succession of health food evolution.

TRENDS IN GLOBAL NUTRACEUTICALS MARKET

The USA leads the market followed by Western European countries and Japan as both major producer and consumer of nutraceuticals (Table 2). In 1998-99, the herbal supplements and vitamins were the strongest performing sector in the global OTC market, with an annual growth rate of 16%. In 1999, the global nutraceutical market was valued at US\$ 6.8 billion, almost thrice the value in 1987 (Table 3).

Table no.2: Apparent size of major world market for Nutraceuticals.

(Vasishta and Kumar, 2002)

| Region | Market size (billion US\$) |
|--------------------------|----------------------------|
| United States of America | 10-37 |
| Europe Union countries | 15-20 |
| Japan | 10-14 |

Table no. 3: Global nutraceuticals demand. (Vanish and Kumar, 2002)

| Item | Demand value (billion US\$) | | | |
|------------------------------|-----------------------------|------|------|------|
| | 1987 | 1997 | 1999 | 2002 |
| Herbals and related extracts | 0.52 | 1.73 | 2.90 | 2.96 |
| Vitamins | 0.68 | 1.38 | 2.30 | 1.93 |
| Minerals & nutrients | 1.14 | 2.39 | 1.60 | 3.31 |
| Total | 2.34 | 5.50 | 6.80 | 8.20 |

The herbal and related extracts which formed only 3.40% of nutraceuticals demand in 1987 was increased to 18.49% in 1996 (Table 4). The report from packaged facts, titled Nutritional Supplements in the US, says sale hit 11.5 billion in 2012 and will reach 15.5 billion by 2017

Table no. 4: The US bulk nutraceuticals demand and growth

| Item | Demand value (billion US\$) | Demand value (billion US\$) | Demand value (billion US\$) | Demand value (billion US\$) |
|------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| | 1987 | 1987 | 1987 | 1987 |
| Herbals and related extracts | 0.03 | 0.03 | 0.03 | 0.03 |
| Vitamins | 0.29 | 0.29 | 0.29 | 0.29 |
| Minerals & nutrients | 0.56 | 0.56 | 0.56 | 0.56 |
| Total | 0.88 | 1.73 | 2.53 | 20.7 |

CONCLUSION:

Numerous drugs have entered the international market through exploration of ethno pharmacology and traditional medicine. Traditional Indian Medicine and traditional Chinese Medicine carry many generations' observations that have well-organized and documented data. China has successfully promoted its own therapies and drugs like ginseng, ma Huang and ginkgo with scientific evidences acceptable for the global community. It is no exaggeration to say that an 'Herbal Revolution' by India is just waiting to happen. India could truly become a global leader in the herbal medicine category by inventing and patenting medicines for several ailments by using a combination or mixture of herbal formulations. Although herbal medicines have been used for thousands of years, basic research programmes need to be focused on the quality assurance.

To overcome contaminations from pesticide residues and heavy metals, there should be control measures to implement necessary standard operating procedures (SOPs) at source. Good laboratory practices (GLPs) and good manufacturing practices (GMPs) are also needed to produce good quality medicinal products. Without all these measures, it is impossible to realize the dream of having a major share of an herbal drug industry despite of having gold mine of well documented and well-practiced knowledge of traditional herbal medicines. Both Traditional Indian Medicine and Traditional Chinese Medicine are great traditions with strong philosophical basis and could play an important role in new therapies, drug discovery and development processes. There is an urgent need for studies to quantify the frequency and potential risk of heavy metal poisoning from Ayurvedic medicines.

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