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Short Communication

A Short History of Evolution of Indigenous Plants and Medicine System

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The importance of plants is well known to us. Life and its growth cannot be imagined without plants. Food for our survival is produced by plants and they also create a healthy and eco-friendly environment to live (Sazada et al., 2009).

The use of various parts of different medicinal plants to cure specific ailments has been common from ancient times in India. The indigenous system of medicine namely Ayurvedic, Siddha and Unani have been in existence for many centuries. Apart from India, these systems are also prominent in Korea, China, Singapore, West Asia and many other countries. The knowledge of medicinal plants has been inherited traditionally therefore; the utilization of this knowledge has become important for human existence. In the old times, plants were used as remedies for the diseases. The oldest religious book of the World "Rigveda" provides information about the medicinal use of plant "Soma" as a medicinal agent by the Indo-Aryans, which was written between 4000 and 1600 B.C. (Bhattacharjee, 2004).

The plant "Soma" is considered to have intoxicating characteristics. This plant is used for sacrificial objectives by Aryans and they also identified its juice as a stimulating beverage (Steiner, 1986). The Aryans also played a vital role in the presentation of therapeutical properties of other medicinal herbs and plants. The knowledge of Aryans about a large number of medicinal plants is demonstrated by the work of Charaka and Sushruta (Kirtikar, 1958).

The ancient Indian literature is helpful in driving the current knowledge of using cinchona in malaria, digitalis, strophanthus and physostigma in heart diseases and of quassia as a bitter tonic. The indigenous system of medicine in the Indian sub-continent known as Ayurveda goes back to 700 B.C. and its systematization is attributed mostly to Charaka and Sushruta who have cited about 700 medicinal plants. The book "Sushruta Samhita" compiled in 1000 B.C. includes a comprehensive chapter on herbal therapeutics and contains remarkable information about the use of medicinal plants (Singh and Abrar, 1990).

Charaka and Sushruta presented their work in the pre-Buddhist period. The rise of Budhism gave an impulse to the study of medicine in ancient India (Singh and Abrar, 1990). The Buddhist missionaries along with religious preaching paid much attention to treat the sick and wounded persons in Siberia and Central Asia. In other sense, they were the medical missionaries.

The first "materia medica" was developed by Greeks while the pharmacy began from Hippocrates (460 B.C.) who was also called the father of medicine. Jheophratus (287-370 B.C.) made great contribution by writing two huge books on history and classes of plants in which they mentioned 500 plant based drugs.

Islam plays a major function in the evolution of a separate branch of therapy based on the philosophy of Al-Quran and Al-Sunnah (Guorra, 1979). Hazrat Muhammad (S.A.W) quoted beneficial properties of different plants such as Crotalaria juncea and Nigella sativa. His wife (Hazrat Aisha Siddiqa R.A) and other companions had sufficient know-how about the herbal medicines and they used them in the treatment of

injures and diseases.

In the Islamic era of science (500 A.D.-1700 A.D.), the aims of herbal medicine were expanded. The muslims amended the Greek system of medicine which smoothened the direction for the renaissance in Europe. Muslims interpreted the medical work done by Indians (Charaka, Sushruta, Nidana) and Greeks into arabic. Opium was the most important medicinal plant innovated by the muslims/arabs into India (Saeed, 1978).

History of Herbal Medicines (Bhattacharjee, 2001).

Period	Approximate number of plants used	Remarks on changes	Literature
3000 B.C. to 1000 B.C.	289	Building a Pharmacopoeia.	Vedic texts.
1500 B.C. to 500 A.D.	650	1. Incorporation of new drugs. 2. Discarding of old drugs.	Charaka. Astanga. Sushruta. Sangraha. Astanga. Hridaya.
500 A.D. to 1900 A.D.	1814	1. Incorporation of new drugs. 2. Discarding of old drugs. 3. Varietes identified. 4. Substitutes identified. 5. Expansion in application.	16 major Nighantus like Dhanvantari Bhavaprakasha Raja upto Shaligram.

A great muslim physician, chemist and philosopher, Muhammad Ibne Zakariya Al-Razi (864-932 A.D.) wrote many books among which the most famous is "Kitab-al-Mansoori" consisting of ten volumes and allotted thoroughly with Greeco-Arab system of medicine. This book was transformed into Latin in 15thcentury A.D. Moreover, he was the first physician who used opium as general anaesthetic. Ibn-e-Rabban Al-Tabavi (883-970 A.D.), a great personality in the field of medicine, introduced his book named as "Fardous al Hikmat" comprising of seven parts (Hylander, 1960). The sixth part discusses the poisonous drugs. The most famous physician and philosopher of all times, Ibne Sina (Avicenna, 980-1037 A.D.) distinguished 760 herbal drugs in his famous book "Qunan fi al-Tibb" which is known as "the Cannon" in the west. It was regarded as the most reliable materia medica of that time (Chartard, 1908).

Another well-known arab scientist Al-Idrisi (1100-1166 A.D.) has made a remarkable place in the field of medicine. He wrote various books on medicinal plants from which the special one is "Kitab-al-Jami-Li-Siffat Ashtat Al-Nabatat". He arranged a large number of plant derived drugs in six different languages: Syriac, Greek, Persian, Hindi, Latin and Berber. Another well-known botanist and pharmacist "Ibne-Al Baitar" who died in Damascus in 1241 A.D. wrote a massive work "Jama-al-Muffaradat" in which he collected the remarks of Dioscorides, Galen, Rhazes, Ibne Sina and others on a large number of drugs. This book discusses 2,000 traditional herbal drugs from which 1700 are herbs. He also wrote a book named as: "Kitab Al-Mughni-Li-Adwiya-Al-Muffaarada".

The historical development of herbal remedies for the treatment of diseases can be categorized chronologically into four stages (Steiner, 1986).

- Crude drugs were prepared and used in roughest manner such as powdered cinchona.

- Drugs were converted into more active and modified forms such as aqueous or alcoholic extracts.
- Separation and usage of pure active principles, e.g. morphine, quinine etc.
- Formulation of bioactive substances by chemical methods instead of attempting to extract medicine as such from natural source.

In 1560, the first chemical substance benzoic acid was separated from a plant source. In 1806, morphine was set apart and its structure was established by Serturner (1783-1841 A.D.). Strichnine, brucine, quinine, cinchonine and caffeine were isolated in next 15 years. Quinine from cinchona bark is an effective remedy measure for malaria and reserpine from Rauwolfia serpentine is suitable against high blood pressure. There has been a significant revival of interest in the study of natural products, based on the discovery of antibiotics and the importance which some of the constituents of medical plants have attained in the treatment of cardiovascular diseases, mental disorders and certain form of cancer.

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