CHAPTER 1

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Ayurveda is an ancient Indian System of medicine. This describes the different diseases and their cures. Several surgical remedies have also been mentioned in Ayurveda.

The drugs recommended in Ayurveda are derived from plants. Extracts from either a single plant or mixtures of extracts from different plants are used. The ancient materia medica is very precise in the choice of the plant and the preparation of the drug from it. It also gives, in detail, the mode and environment of cultivation of the plant, the season (even the time of the day) when the plant should be harvested for the preparation of the drug and the parts that should be used. Unfortunately, however, much of the above details had not been preserved in the original form, well documented for posterity.

नन्द यानि काठनातानुपागतसम्पूर्णप्रभावमर्जीर-गन्धानि
कांलतपामिसरिद्विववनजनुमिरलनुपहलगप्प-वर्ण-रस-सर्व-प्रभावाणि
प्रत्यागृणुदृष्ट्यं विषि सियतानि; तेषां शारवपलपामिसरिनिर्क्षुं
वर्षाकथत्तेऊग्रबं ग्रोषे मूलानि दिशिरे ता दीर्घप्रभावाणि
शारदि त्वक्कपद्ध्यर्गनि हेमन्त साराणि अयतूं गुणपरलमिति — ११०१।

— चर्कसाहित्य, कल्पस्थानम् अथारोध्यायः।
Translation: Of them such drugs should be culled as were put forth in their proper season and have attained their fullness of growth, taste, potency and smell, whose smell, colour, taste, touch and specific action have not been impaired by season, sunheat, fire, water, wind or insects and which are fully mature and growing on the northern side. Of them again the branches and leaves which have recently grown should be gathered between the rainy season and spring. The roots should be gathered in summer or in the winter from trees whose ripened leaves have been shed, the bark, bulb and milk of the plants in the autumn and beginning of winter and the fruits and flowers in their proper season.

The fame of Ayurveda has been a great incentive to medicinal organic chemists to extract the physiologically active chemical constituents from the medicinal plants. The usual practice is to extract the plant material by organic solvents, separate the constituents by distillation, crystallisation/chromatography and test them for their medicinal properties. Many times the compounds isolated have proved to be medicinally useless. It is possible that the solvent treatment of the plant had led to the loss of its medicinal activity. It would be rewarding to extract the plants not with the usual organic solvents but such
'edible' solvents as water, milk, butter, oils etc. as is mentioned in Ayurveda. Such an investigation is under progress in this laboratory.

Chemical investigations of Indian medicinal plants, has however, not proved to be totally disappointing and several useful compounds have been obtained from them. The outstanding is an alkaloid from *Rauwolfia serpentina*.

Besides the plants described in Ayurveda, many other plants are also used regularly in daily life. No great pharmaceutical value is attached to them. The leaves of *Piper betle* Linn, for example, are being chewed throughout India for ages. After heavy meals the leaves with chuna (slaked lime), catechu, coconut, cardamom, cloves and other spices are chewed slowly. This was believed to aid digestion. Recently, however, it has been reported that the leaves are good cardiac stimulants.

The leaves of *Murraya koenigii* Spreng are also commonly used in India. Known as curry leaves, five or six small leaves of this plant are used in curry preparations (for 250 ml approx) to add a delicate fragrance to it. Occasionally raw leaves are eaten as a cure for dysentry, and after boiling with milk and rendering into paste are applied on poisonous bites and
eruptions. Decoctions of the leaves are also used as febrifuge, and infusion of the roots and leaves in vomiting.

Our interest in the plant arose essentially out of curiosity to know whether this widely used plant would have some pharmacologically active constituent of interesting structure. There was further a small doubt whether कैदर्य (Kaidarya) a well known Ayurvedic plant was this plant or the better known *Melia indica*, Linn (Meliaceae).
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