From time immemorial man has been in quest of medicines to cure diseases. In this pursuit he has watched even the behaviour of animals which has given him important clues in certain cases and thus added to his knowledge and helped him discover useful herbs. The knowledge of drugs has thus been growing steadily throughout the ages. The vast store of this accumulated knowledge about drugs that were used in the past by the people of different civilizations has helped a great deal in the growth of modern system of medicine. Most of our present day knowledge of therapeutically active principles has developed from the study of herbals and folk medicine. Attempts to sort out empirical cures and rationalize the treatment of diseases began in 19th century, and this led to the efforts to salvage the ancient materia-medica.

India has a long record of achievements in the field of medicine and of drugs in particular. The ancient science of Ayurveda can be traced back to the days of the Rig Veda, one of the oldest repositories of human knowledge known to the world. In the Atharva Veda, a religious book of Hindus composed about 4,000 to 5,000 years ago, mention is made of about 2,000 medicinal plants. With her vast expanse of territory and varied climatic conditions, physical features and fertility of soil, India has been a rich nursery of medicinal plants throughout the ages. The value of Indian drugs was recognised far and wide in the ancient world.

A systematic identification of drugs used in indigenous system of medicine in India was started thirty-five years ago, and a number of important medicinal plants prescribed by Hakims and Vaidyas have been investigated. The work received incitement in 1951 when the Indigenous Drugs Enquiry Committee gave an outline of the status of
indigenous drugs and the Government started taking interest in this field. During the decades that have followed, research on indigenous drugs has made considerable progress. The rapid development of organic chemistry in last one hundred years has made it possible to study the structure of natural drugs. From the great advances made in the field of synthetic organic agents, that exert a biological response, the interest now appears to be extending back towards the natural products. This has received considerable impetus since the discovery of penicillins.

It has now been realised that even though such studies may not lead to the discovery of potent remedies from plant sources, the background information obtained from the study of chemical structure and the pharmacological actions could serve as models for synthetic analogs and also provide leads for medically interesting compounds.

The number of chemical compounds, of proved or potential usefulness, as the active components of plants grows apace. Many useful compounds occur in nature and to list a few morphine, codiene, emetine, strychnine, pilocarpine, atropine, hyoscine, digitoxin, rutin, papain, papaverine, quinine, quinidine, ergotamine, ergonovine, cocaine, vineristine, vinblastine, d-tubocurarine, protoveratrine, A and B, physostigmine, caffeine, reserpine, xanthotoxin, penicillins, tetracyclines etc., present a broad and representative range of pharmacological activity.

The importance of medicinals derived from plants is often underestimated. The history of medicine shows that some of the most potent medicinal compounds, a few of which have been mentioned above, have been obtained from natural sources. Once the presence of a potent compound in a particular plant has been established, help can be taken from plant breeders to increase the concentration of the desired product. Sometimes
the study leads to compounds which may not be useful in medical language, but owing to their high yield, their structure can often be successfully modified to resemble a proven active compound and thereby opening a door for creative semi-synthetic conversions, e.g., diosgenin, isolated from some *Dioscorea* species, is the only source for most of the steroidal compounds.

Chemical investigations also prove to be of immense help in plant taxonomy. Study of chemical constituents bring to light new characteristics, helpful in identification of plant specimens, and provides information about patterns of chemical variation within genera and aggregate species. This may ultimately demonstrate how one pattern of plant constituents evolved from a proceeding one. Moreover, joint botanical and phytochemical studies may provide better understanding of the biological and ecological meaning of distinct spectra of primary and secondary plant metabolites, so that, in future, biological pathways can even be conducted on a laboratory table and modified according to the needs.

In India during the last decades much emphasis has been laid on screening of plants for the discovery of new and better drugs. For this purpose not only old and reputed medicinal plants are being chemically investigated but also those which have got no known medicinal properties.

*Kashmir valley is well known for its biaesthetic richness. Nature has endowed the valley with unusually favourable climate and soils for a lush growth of vegetation. The valley provides ample scope for phytochemists because of the vast plant reserves it holds which have remained under-explored so far as their chemical constituents are concerned. The search for vegetable resources of drug material led the*
author to undertake the chemical investigation of a few plant species of this region and the present study deals with the isolation and characterisation of the chemical constituents of the following medicinal plants:

1. *Iris germanica* (Irish *kashmiriana* Baker).
2. *Iris kumaonensis* Wall.
3. *Datura quercifolia* HBK.

In view of the present trend in the country of converting a high yielding plant constituent into a potential compound, iridin, which occurs in five percent yield in *Iris kumaonensis*, has been converted into a 2-methyl-4-ethyl-\(\Delta^3\)-isoflavene derivative, a well known skeleton related to estrogenic activity.

The variation in environmental conditions, which the valley provides, may have a pronounced effect upon the storage of chemicals and their availability in the plant species of this region, thus making the chemical studies still more interesting.
REFERENCES


