



Ethno – Pharmacology, Pharmacological Evolution of Medicinal Plants and Need to Redefine, Reorient & Recast the Present Approach

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Abstract

As the results with the present pattern of working on medicinal plants to find a new drug is not very encouraging, a new methodology or research in being presented. This will lead to quicker and better results. Moreover, persons in all disciplines particularly, Botanists, Pharmacologists, Chemists and the Clinicians of modern and Indian system of medicine shall have to come closer to achieve results as well as avoid duplication of work to save existing meager research resource.

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Since life and diseases Co – Exist, my belief is that diseases and remedy also Co-Exist. What I mean to say is that a person from Calcutta could not come to Jammu for treatment of Eg. Snake bite with available means of transport and communication. Obviously, he searched the answer in Calcutta itself and so is the case with Tibet and China and also other geographical separated areas who develop their own method of treatment by investing locally available plants and other sources. Therefore, today there are number of

plants, minerals and their combinations available which are effective against one particular disease.

By nature, man must use the most easily available material as remedial measure for any disease, obviously plants were the first and so the medicinal properties of the most plants were discovered first. Indians remained the masters on the subject not only in acquiring the knowledge but with amazing accuracy they have succeeded in transmitting this knowledge through

verbal discourses only to the smallest house in the country.

Indian medicine has left behind through patchy (forgotten with passage of time) but a fabulous and breath-taking treasure of information regarding various medicinal plants and their preparations, metals and their compounds and many animal products. This has only been possible by acute power of observation thinking, analysis and extensive trials by our ancestor who perceived the truth.

But with the advent of antibodies of allopathic system coupled with benefits of surgery the plant medicines has gone into the background in India more in present century than in any other time, due

to: -

- Basically, available Tablets and Mixtures.
- Fast moving life.
- Quick results.

Besides, those who possessed such knowledge have also played a part in its death by keeping this knowledge so exclusive to themselves on their disinterested family members that today only its rapid disappearance remnants are left.

For not collecting the correct information on plant medicine urban trained scientists are also to be blamed because they are too proud to squat on mat of grass, stones and sleep on leaves and eat Maize with whey or Jungle leaves boiled (saag) which is occasionally essential to acquire this knowledge. Moreover, the people with dirty foul-smelling clothes he meets in these areas are more likely to repel then attract him but certainly it is loss to avoid such a man. Moreover, there has really been a keen interest by training scientists to leaves the city comforts and mingles with the men who could provide them some useful information.

Being trained in Western therapy and after practicing it for about fifteen years I realized that it is still far from satisfactory means of curing. Moreover, whatever drug is available is costly, not always accepted by the body, associated with unwanted side effects, has short expiry and not very palatable and above all beyond the reach of a common man.

I am convinced that amidst the mad race for synthetics drugs i.e. chemical bullets which often cure but occasionally kill, the natural products, particularly the

plants, alone will ultimately come to the rescue of man.

Mr. Chairman I want to emphasize that “Research is a dignified profession to be pursued only by the consecrated and inspired, in quietitude, at a leisurely pace, and away from prying eyes. It cannot be placed on business footage where one new fact is to be returned for each quantum of rupee invested. “The original must come about through the deliberate activities of creative mind. And a creative mind works best away from artificial and prodding. Great discoveries evolve they are not delivered on call. Therefore, the present approach has to be Redefined, Recast and Reoriented.

Some Suggestion

What is the truth behind the mysterious legends few of them claimed to be panacea for all diseases on the earth? What is the truth behind tit-bit formulation or hints which reach me frequently from patients? This sets me thinking that there exists in India and old wisdom which promises cure not for all but many of the diseases where ever the 20th century medicines have failed.

Moreover, to rescue the financial burden of health are particularly in developing countries where the modern life saving drugs are beyond the reach of nearly three quarter of the population, Plant medicine has certainly a place in cure. Moreover, very large proportion of the world population uses herbal remedies as folk medicine but despite this, it has been estimated that out of 2,50,000 – 5,00,000 species of higher plants available on earth. Only about 5 – 10% has been investigated pharmacologically and that too usually for one specific type of activity: -

Why we failed so far, the causes are to be analyzed: -

1. No mind to explore this side is the primary cause.
2. Method adopted: -
 - a) Short tours and enquiry proved useless.
 - b) Copy out Ayurveda books and claim to be original worker as we have no time to move out of Laboratory for reasons better known to everybody these days.
 - c) We are more anxious for cheap newspaper publicity rather than useful work completion.
 - d) Moreover, inspite of many facilities the stock of last 30 years is not very encouraging.

It therefore imperative to change the present working pattern by improved collection, management, development and application of knowledge which

already exists to achieve quick and better results.

Workers on Indian system of medicine working in periphery and doing some research must be encouraged by the Govt. and Scientists and financed to some extent where ever necessary. I take this opportunity to put forth a new idea of “Free research”. It is not free in the literal sense of the word but the expenses on research and survey can be minimized to a large extent thus saving substantial amount in terms of finances and getting better results than by confining our hopes only on big laboratories and fish-bowl workers of our country for results.

The stages of work are suggested to be as follows:

1. Learning and knowing accurately about the prescription formula, (Drink fruit, Gutte Flower and Mooli Juice) plants and its parts to be used, season of collection, method of use, doses and the proper identification of the disease for which these are used E.g. Ulcer and Cancer.
2. Observing the locals constantly and carefully the disease for which used, the method of use, side effects and the claimed results and their confirmation from various persons and workers in different areas and parts of country by co-ordinated work. This will narrow the time gap between finding a useful plant and its trial on human beings.
3. Demarcation of area of occurrence of useful plants.
4. Deleting most of the false prescriptions, avoiding, publicity mongers, jugglers and charlants, and self-styled healers.
5. Collection of plant in flowering stage for correct identification E.g. Chan-poplus Euphration (Punjab) Bhan-rus Cotinous (North Punjab).
6. Very careful collection of plants and its useful parts by persons well versed with identity and not by peons and newly engaged Assistants, at proper time for constant and regular supply of raw material to the modern Laboratories.

For the above, the help of Army personals particularly those stationed at high altitude and different terrains where scientists cannot visit very frequently will be of utmost help for collection of plant round the year. They must be requested to collaborate in the process.

7. Honest approach of the lab. Worker for finding the possible useful extract for a known and related disease. But if the pharmacologist still fails in

achieving some useful results, I feel that there may be some things wrong with his technique of Isolation of active principal or the animal model.

8. Animal experiments.
9. Finally, the trial on human being-In these honest trials and co-operation of clinician is of utmost importance.

First six i.e. before the plant reaches the Lab. Are most difficult because most of the knowledge on plant medicine is not readily available and those who know something really useful are unlikely to break their reserve except after some period of acquaintance. It is an unfortunate fact that in hurriedly programmed tours, the researchers often mix hear say with facts quite indiscriminately. Therefore, such findings diminish in value as scientific records and hence utmost vigilance is needed to discover the truth.

I am convinced that this may not be carried out honestly by the workers who are deputed under a time bound tour schedule to a particular area for collection of the above date.

For first six, some interested locals should be taken into confidence who should be given little financial aid but more moral support to do this work which must be checked and counter checked by regular visitor of senior scientists before putting the plant or formula in the Laboratory thereby saving tremendous amount of money and time. In this way I am sure, we will be more nearer to accuracy and success than before. Here I will stress again that only those plants which are found to be affective for a particular disease and have passed above sieve should be taken for lab. Studies to save time and resources and not every plant randomly on hearsay only. Such idea of co- operation with and putting a rural folk to research may not be liked by city dwellers or big Lab. Workers and even when confronted with a new idea from them, they do not grasp their importance as they cannot comprehend the level at which life is lived in large areas of our country.

10. In addition, Industries should be encouraged to build closer links with research institution and finance the project for their own benefits in the long run.
11. There should be identification collection and systematic documentation of all information about individuals and groups working in different

parts of the country and world for closer links and frequent exchange of knowledge regarding the undertaken work to enable a meaning-full discussion on the topics.

12. A close relationship of unity and co-operation, mutual help, mutual understanding and mutual encouragement should be established between the peripheral support workers, research Laboratory and the clinicians. It is essential to create favorable condition for work and study, so that scientific and technical personal can devote themselves entirely to the advancement of scientific research.
13. Name and part played by the original worker should never be ignored as he works more in spite of the fact that those who part with this knowledge are not very keen for this.
14. Yet the static lab. Scientist who just confirms the original findings by isolation of active principal and animal experiments gets whole credit. This certainly masks the zeal of original workers.
15. Although the annual expenditure on research institutes is tremendous but returns from such huge investments are almost negligible. Therefore, serious efforts are needed to overhaul the administrative setup for optimum utilization of input and safeguarding the interest of young qualified scientists and other genuine and sincere workers of allied cadres.

Cultivation of Medicinal Plants

It has been observed that immediately after knowing something about a useful plant we try to cultivate in the Lab. Gardens where it may grow but loose all its properties as medicine. Such plants should never be discarded unless its study has been made from the plant from natural environment on which original study has been based.

Last but not the least, there is not a single philosophy that will lead to discovery of new and valuable plant drugs but persons in all disciplines particularly, Botanists, Pharmacologist, Chemists and the Clinicians of modern and Indian system of medicine shall have to come closer to achieve results as well as avoid duplication of work to save existing meager research resources.

This interest of mine would have faded but for the stimulating, innovative and inspiring advice from Dr. C.K.Atal. Director Research Laboratories Jammu. His kindness to me is traditional. I turn to him for advice and enlightenment in matters pharmacological. He seems to have stored in his own personal computer an in-exhaustible amount of information of widest possible variety. The fruits of C.K.Atal's Labor are being reaped, and will be reaped for many years to come.