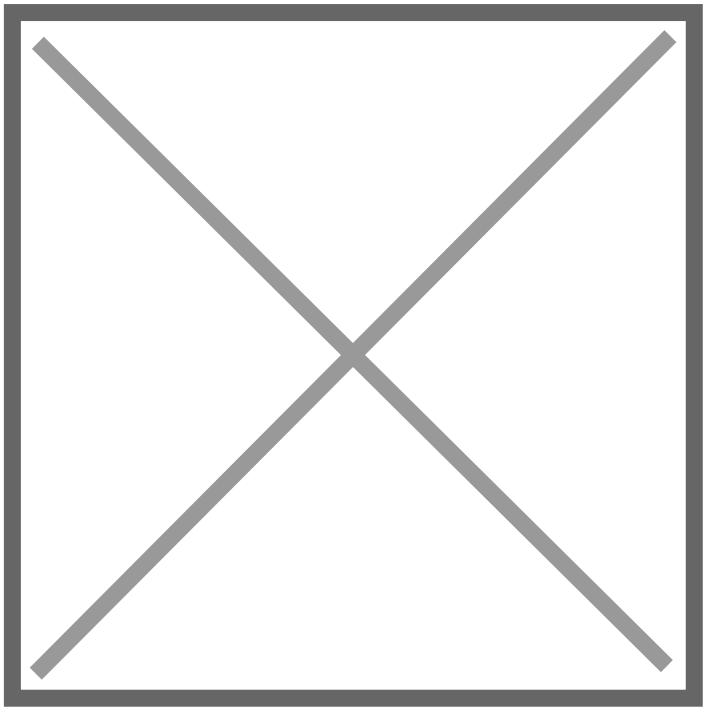
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Test and patent traditional products for all diseases

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The community of Indian research workers, contributing to this important task of integrating the ancient with the modern, need to always look for protection of any intellectual property which meets the basic requirements of novelty, usefulness and non obviousness. Can the existing knowledge and products based on them be protected? The answer is "no". What preexists, what is in the public domain cannot be protected. Natural products cannot be protected. Further, the preparations that have been used for many years constitute knowledge in public domain. Therefore, they cannot be patented. However, if new uses are found, a "use" patent can be obtained.

If this is the case, what can we protect? If a non-obvious technique has been employed for fractionation of constituents of herbal formulations, then an international patent becomes possible. Similarly, if synergism is shown between two fractions, which is very likely in Ayurvedic preparations, patenting at international level is permitted. All the preparations arising out of Ayurveda should be tested for as many diseases as possible. Any preparation found effective in diseases, which has not been already described in literature, can be patented for that particular disease.

Science-based products

Ayurvedic products can have four different types of uses. First, for minor ailments like dyspepsia, unpleasant taste, anorexia, and biliousness. The second major set of uses is likely to include detoxifiers, rejuvenators, toners, resistance builders and for longevity. Both these sets of preparations are likely to be available over the counter (OTC).

The third use will be support therapy, where these therapeutics may be given along with the allopathic preparations. These will most probably be prescribed by the medical practitioners who use combo-therapy to take advantage of the synergy between the two sets of preparations, for the overall benefit of the patient. In combo-therapy, bioenhancers, detoxifiers, toners and specific therapeutic agents are used which accelerate recovery. Hospitals may also make similar use based on the existing system. With time this combo-therapy concept may be accepted in India too.

The fourth use of the traditional medicines is likely to be the treatment of old age diseases for which these systems have already shown a great degree of efficacy.

The old age diseases which will be of increasing concern to the West include various forms of cancer, AIDS, osteoporosis, arthritis and related diseases, Alzheimer and Parkinson's diseases (to some extent) and obesity. These diseases are likely to be treated in three ways in future viz., through completely allopathic treatment, through completely traditional methods in special traditional systems based hospitals where both the philosophy and treatment will be traditional and the third and most likely method will be a combination of both. In this quick reduction of disease intensity will be brought about through allopathic system but the long-term treatment, convalesce and resistance building will be achieved by using techniques of the traditional systems of medicine.

To create new Ayurvedic products, knowledge based on modern biology and chemistry needs to be integrated. This will result in better definition of the existing products, improved understanding of their mechanism of action, modified composition at molecular level and better understanding of interactions amongst various molecules.

Potential knowledge-based new products

Traditional preparations based on plant extracts can end up containing hundreds of molecules. Many of them are fillers, whereas some may be even toxic. The remaining may be beneficial. It has been shown quite often that there can be considerable degree of synergy among various molecules of a plant extract. Thus, in such a case, the whole fraction or its sub-fraction will be an appropriate preparation, particularly if some of the other fractions turn out to be relatively toxic. The advantage of a trim product containing limited number (say around 10) of molecules is that it can be molecularly defined (rather than the HPLC defined products used at present). Further, the interaction of these molecules with other drugs can be investigated and documented much more easily. As the concentration of the active molecules is likely to be high, such products will be fortified in nature. If the mechanism of action of such products can be explained at molecular level, the product will automatically have higher credibility.

There are products of Ayurveda, which by themselves are not efficacious against a particular condition but enhance the efficacy of another drug. Such components are routinely found by one of the CSIR laboratories and these contain components, which may increase the bioavailability of an allopathic drug or act as a catalyst for some other biological activity. The new area of research is a clear result of trying to understand Ayurvedic practices through the techniques of modern biology. If any such bioehnancers can be discovered from the practices of traditional systems of medicine of the whole world, for highly toxic drugs used for diseases like various kinds of cancer and AIDS they will bring down the dosages and thereby the toxicity of the current drugs. New bioenhancers may be discovered based on the possible mechanisms through which these agents may be acting.

Though detoxification is practiced in other traditional systems of medicine also, Ayurveda has much more elaborate procedures of detoxification. For most purposes, however, the mild detoxification procedures through the digestive tract and the skin are practiced. These can be practiced even without a prescription, for maintenance of good health. If molecularly defined detoxifiers can be generated along with their mechanisms of action, this mild therapy can become extremely popular with the health conscious people of all regions.

With the use of products which are molecularly-defined and mechanistically understood, there is great potential of using fractions from plant extracts not used for therapeutic purposes at present. Such new herbal preparations can significantly increase the number of therapeutic preparations of herbal origin available for the health-care of the world.

A new concept of Ayurvedic practicesÃ¢â?¬â?•from the practice in Ayurveda of adding trikatu (a mixture of black pepper, long pepper and ginger) to many formulations has resulted in notion of a "bio-enhancer", which improves the bio-availability and bio-efficacy of a drug without itself acting as a drug. Piperine has already been shown to be a bio-enhancer for refampicin during the treatment of tuberculosis. The concept developed by Regional Research Laboratory, Jammu, based on ayurvedic practices can be easily assimilated by not only allopathic system but also by other traditional systems of medicine. Search for bioenhancers working in different ways from ayurvedic preparations needs international attention, research effort and eventual use.

How do we get scientists interested in such research? The first need is to expose good scientists to the accumulated wisdom of the ISM. There is no doubt that enormous opportunities of doing focused basic-cum-applied research exist in this area. For example, the mechanisms of action of Bhasmas, detoxification mechanisms involved in reversal of aging, bioenhancers, and molecular synergism offer a large number of scientifically challenging and commercially useful issues to work on. Initial interactions between scientists and practitioners of ISM may be difficult because of different operational nomenclatures, but with time communication becomes excellent. For holding discussions and having interactions with ISM practitioners, there is a need for group meetings but also more importantly, there is a need for "meeting of minds". What is urgently required is the change in attitude of scientists, traditional practitioners and industry on one hand and the special policy initiatives by the Government on the other. Then only we can create the golden triangle of traditional machine, modern machine and modern science.

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