

# Editorial

## A PHARMACOLOGIST IN INDIA

While increased facilities for research are now being made available in various institutes, a greater number of personnel is being trained in India. This includes medical and non-medical pharmacologists.

The exact role to be played by this new generation of workers is not clearly defined. A pharmacologist (or any medical research worker) can not pursue his work unless job opportunities are made available and field is created for his work. There is already certain amount of frustration amongst trained workers because of lack of suitable job opportunities. Till recently the only pharmacologists available in the country were those who had primary training in medical curriculum and these too were in relative minority so that all the trained persons were suitably employed in medical colleges. At one time so much was dearth of trained pharmacologists that many of the senior posts went abagging or were occupied by physicians. Looking to these difficulties in finding out suitable personnels, it was resolved by the Post-Graduate Medical Education Conference held in New Delhi in the year 1964, under the auspices of Indian Medical Council, that up to 30% of the teaching posts in non-clinical or para-clinical disciplines may be made available to non-medical persons.

With this resolution being accepted by Medical Council of India a number of medical colleges in the country agreed to train non-medical personnels in Pharmacology and absorb them as teachers later on. The process has already started, in the mean time many persons, medical and non-medical, who went abroad for training in pharmacology have returned to India as fully qualified pharmacologists. Now a stage has however, reached when there is almost a saturation in the higher echelon of job opportunities in pharmacology. It is therefore necessary to pause and think regarding the future of this new generation of trained pharmacologists. The various lines which are possibly available at present for trained pharmacologists may be summarised as below :

- (a) *Medical Teachers* :—The number of teaching posts in medical colleges being limited, the younger generation of medical and non-medical pharmacologists would experience considerable difficulties either in securing these posts or in subsequent promotions. The difficulty is being experienced now and would be more severe in near future. Besides, in India, the emphasis being on teaching applied pharmacology, the scope for non-medical pharmacologists would be limited in medical colleges. The difficulty can be mostly overcome if the employers adopt a continuous running scale for all employed medical personnel, with arrangements of necessary efficiency tests.
- (b) *Research Worker* :—Government Institutes like CDRI and semi-or quasi-Government Institutes like ICMR, CSIR, etc. employ pharmacologists for conducting various types of research both fundamental and applied. Here again, limitations exist and only a few can be employed but there is greater scope in this sphere for non-medical pharmacologists.

(c) *Pharmaceutical Concerns* :—Some of the manufacturing concerns in India have started drug research sections. In foreign countries drug research in pharmaceutical companies has vastly developed, so much so that most new drugs introduced are from the laboratories rather than from university departments. However, their counterparts in India have not done enough in this aspect. Only a handful of them are doing a bit by way of research. Indeed, if the drug industry takes it up seriously, larger number of young pharmacologists can be usefully employed and that would be in the interest of all concerned.

### **Guidelines for Research**

Some controversy regarding the type of research work to be conducted in India, probably justified, exists. There are protagonists of pure academic research or applied research or both. In the Western hemisphere, most university departments concern themselves only with pure academic research and the screening programmes are left with the research departments of pharmaceutical concerns. We are at present facing a dilemma in our country since whenever some pure academic type of work is done and published, most of our colleagues and others immediately question its applied value. I wonder even the greatest of discoveries had any immediate applied value. I believe that research, particularly in new drug, should not be compared with research in textile or engineering techniques.

The training of a scientific worker should be such that he can contribute something new and unless the person develops a clean chanelised thinking, any research, even applied, is fruitless. To develop such a worker is a time consuming process and essentially needs academic work. Even underdeveloped countries where institutes are temporarily manned by personnels from developed countries have adopted 'basic research' as a fruitful line.

### **Research on Indigenous Plants of Medicinal Value**

It is time consuming, laborious and often frustrating work. The amount of funds, labour and time which have been devoted on indigenous plants have not yielded even a fraction of expected results. The tall claims made by exponents of indigenous drugs have hardly been ever fulfilled, when put to scientific tests. This naturally raises a very pertinent question wheather we should at all continue pursuing work in indigenous drugs or devote that time, money and talent for biochemical pharmacology and organic synthetic chemistry.

### **Clinical Trials with Clinical Pharmacology**

Though most pharmacologists in medical colleges in this country are basically medical graduates and are teaching pharmacology in an applied manner but the 'Clinical pharmacology' in real sense of the term hardly exists any where in India. When a greater number of non-medical brilliant workers will be available, the place of medical pharmacologists will have to be clearly defined. It will not be out of place to suggest that non-medical pharmacologists should confine themselves to teaching and research of pure pharmacology while medical pharmacologists should devote themselves to teaching and research of applied and clinical pharmacology.



(iii)

Finally, I would like to mention a few words regarding the sphere of toxicology and its relationship with pharmacology. At present toxicology is taught by teachers of forensic medicine as well as by pharmacologists. I am inclined to believe that there is considerable overlapping in the two departments. By way of training and education, a teacher of forensic medicine is concerned more about the medico-legal aspect of toxicology but the rest of this discipline should naturally come under the purview of the pharmacologist, who is more suited to tackle the various problems of toxicology. I would like to suggest here that the medical pharmacologists should be responsible to deal with all cases of toxicity of drugs in the clinical departments.

M. N. JINDAL

*Professor and Head of the Department of Pharmacology  
B. J. Medical College, Ahmedabad.*