

EDITORIAL : VAN DIE REDAKSIE

## FACILITIES FOR PHARMACOLOGICAL STUDY AND RESEARCH IN SOUTH AFRICA

Tremendous advances have been made during the last two or three decades in many sciences. As far as the medical disciplines are concerned perhaps the most outstanding achievements have been made in the discovery of new drugs of all kinds. Countless lives have been saved since, firstly, the sulphonamides, and then penicillin and a large number of other antibiotics were introduced for the treatment of infections; along with these many other types of chemotherapeutic agents have been introduced for tuberculosis, malaria, and many other diseases.

In the field of endocrine therapy an interesting variety of substances, many of them synthetic in origin, have become available—adrenocorticotrophic hormone (ACTH), neuro-hypophysial hormones (oxytocin, vasopressin), adrenocortical hormones (aldosterone, glucocorticoids) sex hormones and anabolic steroids, oral contraceptives, anti-thyroid drugs, and insulins and oral antidiabetic drugs are all in daily use. For blood disorders and for modifying the coagulability of the blood there are also useful drugs in our armamentarium. The antihypertensive drugs, although not ideal, are valuable in many cases, and excellent results are being obtained when they are judiciously administered. For neoplastic disorders a number of palliative agents are in vogue, requiring special skill in their administration, and although not very satisfactory they give promise of better things to come. The introduction, only recently, of the thiazide and related oral diuretics has already changed the prospects of so many patients suffering from oedema and hypertension.

Many other examples can be cited of drugs which are valuable in miscellaneous disorders. A new world has been opened in the field of drugs; as Dale<sup>1</sup> has pointed out, pharmacology has risen to major rank among the group of scientific medical disciplines. Mankind can look forward to spectacular developments in the prevention and treatment of disease. The doctor today has at his disposal most wonderful remedies, and can conduct a very satisfactory and scientific approach to relieve human suffering.

In special fields of medical practice other valuable agents that may briefly be referred to are those currently used in neuropsychiatry. The so-called tranquillizers, the antidepressant drugs, sedatives and hypnotics, anticonvulsant drugs, antiparkinsonian drugs, and other preparations have led to epoch-making progress in the successful treatment of mental and neurological disorders. Finally, in this incomplete list of drugs that have become widely available and almost household words, we must emphasize the great advances in anaesthetic practice; the anaesthetics, analgesics, skeletal muscle relaxants, and other

drugs used in pre-operative and postoperative management of patients requiring operative procedures have made surgical practice reach tremendous heights of skill and daring.

Throughout the civilized world (as pointed out in an article by Prof. N. Sapeika in this issue of the *Journal*), university medical schools and other institutions, such as the major pharmaceutical organizations, have enlarged and expanded their pharmacological departments. The routine research is probably greater here than in any other medical discipline. The medical schools are responsible for the training of its students in the basic principles underlying the mode of action of drugs, their effects, good and bad, on the numerous systems of the body, and the evaluation of drugs in regard to their potentialities as therapeutic agents. The teachers have a great responsibility to ensure that the future doctors will have a thorough knowledge of pharmacology in all its aspects and that they will know the basic principles necessary for the rational use of drugs in daily practice. In the pharmacological part of his career the student will therefore learn about the actions of drugs and what is to be expected from them. A certain number of students with the right qualifications should also be specially trained for future laboratory or clinical research on drugs. It is the concern of the teachers to devote all their time to keeping abreast of the whole wide field, of recent advances on all fronts, and of the week-by-week changes in status and the academic and commercial aspects of drugs. It is their concern also to be up-to-the-minute, not only with regard to drugs used in medicine, but also toxic agents used in agriculture, industry and in the home.

The inadequate staff-student ratio in our own medical schools must be corrected. The classes are big and the number of teachers and the facilities for proper tuition are small. Only at the University of Pretoria is there a chair of pharmacology. Professional posts carry not only the prestige, but also the greater scope for personal initiative which the professional title implies. Properly established departments with lively research interests carry more weight and are more likely to get financial and other support from potential donors. If there was no doubt about the provision of such departments earlier in this century, there is without doubt a greater need for full establishments now. As pointed out by Paton<sup>2</sup>: the early days of pharmacology are only just ending; its main contribution, both to biology and to medicine, is still to come.

1. Dale, H. H. (1946): *Brit. J. Pharmacol.*, 1, 1.

2. Paton, W. D. M. (1963): *Chemistry in the Service of Medicine*. London: Pitman Medical Publishing Co.



## FASILITEITE VIR FARMAKOLOGIESE STUDIE EN NAVORSING IN SUID-AFRIKA

In hierdie uitgawe van die *Tydskrif* plaas ons 'n kort oorsigartikel oor die fasiliteite vir farmakologiese studie en navorsing in Suid-Afrika. Die artikel is geskryf deur prof. N. Sapeika, van die Universiteit van Kaapstad, wat onlangs verskillende internasionale farmakologiese kongresse in die buiteland bygewoon het. In die artikel vergelyk professor Sapeika die fasiliteite wat in ons land beskikbaar is met dié wat elders bestaan.

Ons kan nie anders nie as om die toestand van sake deeglik ter harte te neem. Soos dit ook die geval is met sommige van die ander basiese, voor-kliniese vakke, is hierdie 'n gebied van die moderne medisyne wat in ons land nog betreklik verwaarloos is. En dit is jammer dat dit so moet wees. Op kliniese vlak vergelyk die mediese praktyk in Suid-Afrika uitstekend met dié van ander lande. Ons moet ook wat die ander vakke betref ons agterstand inhaal.

Die farmakologie is veral *een* vakgebied waarop ons dit nie kan bekostig om agter te raak nie. Dit is so omdat daar op hierdie gebied gedurende die afgelope aantal jare sulke merkwaardige vordering gemaak is. Maar, dit is ook terselfdertyd 'n gebied waarop daar vir die praktiserende geneesheer sowel as vir lede van die publiek groot gevare skuil as die geneesheer nie ten volle op die hoogte van sake bly nie.

Die essensie van goeie opleiding in die farmakologie is nie dat die dokter net op die hoogte sal bly van terapeutiese aangeleenthede nie, maar dat hy in staat sal wees om diskriminerend te werk te gaan en sy eie oordeel te gebruik. Daar kom daagliks ander en nuwe geneesmiddels

op die mark. As die geneesheer sy professionele status onaangetas wil hou, moet hy in staat wees om self te oordeel en te kies en te besluit wat in die beswil van sy pasiënte sal wees.

Ook op die akademiese vlak moet ons die bestaande fasiliteite ernstig oorweeg. In sy artikel, waarna ons alreeds verwys het, toon professor Sapeika aan dat al die personele van al die farmakologiese afdelings van al vyf ons geneeskundige skole tesame nie eers soveel is as die gemiddelde mannekrag van *een* oorsese farmakologiese departement nie. Van verantwoordelike navorsingswerk op dié gebied kan daar dus nie veel te reg kom nie.

Alhoewel ons veel dank verskuldig is aan die groot hoeveelheid en goeie kwaliteit van primêre navorsingswerk wat deur sommige van die farmaseutiese firmas gedoen word—werk waarsonder ons nie sal kan klaarkom nie—kan ons tog ook nie toesien dat die inisiatief op hierdie gebied heeltemal uit die hande van ons mediese fakulteite gaan nie.

Ons moet optree voor dit te laat is. Die farmakologie is 'n sleutelvak in die moderne medisyne. In die hele land is daar net een leerstoel in die farmakologie—aan die Universiteit van Pretoria. Die nodige wetenskaplike en akademiese milieu sal slegs ontstaan as ons meer leerstoel instel, ook aan die ander universiteite, en as ons die werksomstandighede en werksvoorwaardes so gunstig moontlik maak. Ons moet goeie mense trek en hulle goed betaal sodat eersteklas navorsingswerk en onderrig onderneem kan word. Dit is lankal tyd dat die farmakologie die stadium van mondigwording aan al ons universiteite moet bereik.