CONCLUDING REMARKS

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I am greatly honoured by being given this opportunity to summarize the achievements of the Third International Symposium on Medicinal Chemistry. This Meeting has achieved such a uniformly high standard that it is quite unnecessary for me to refer to particular contributions. Therefore I shall give some general impressions.

It was refreshing to find the word *Selectivity* in the title of the very first paper. It is a word which cannot be heard too often in medicinal chemistry meetings, because, no matter how striking the physiological effects of a new drug may be, it can have no medicinal importance unless it is selective.

The present Symposium represents a tremendous change in content from most of the earlier medicinal chemistry meetings. It was the custom for the latter to be almost entirely chemical in nature, with only dark hints that the substances described had biological action. This Symposium, however, has leant the other way by moving chemistry rather into the background. We should be glad of the opportunities, given us during the last three days, to understand how drugs are acting, at the biochemical and biological levels. Yet it may be advantageous for some of the Symposia in this series to keep chemistry a little more in the foreground.

Each of the three topics of the present Symposium was a contribution of great relevance to the present state of our subject. The first day was devoted to discussions of *The biochemistry of microorganisms as a basis for the rational development of anti-infective agents*. On that day we had laid before us much of the most fundamental work now being done on the action of antibiotics. The only significant omission seemed to be the anti-infective agents of entirely synthetic origin, e.g. the nitrofurans and nitro-imidazoles, whose mode of action has never been adequately discussed. The subject of our second day, *Synthetic analogues of the biochemical messengers*, helped us to realize that hormones act only through a long chain of biochemical reactions at the end of which come cyclic-AMP and the prostaglandins. The absence of the latter from the programme is apparently due to the prostaglandin symposium in Vienna next week. Our final day, on *Physicochemical properties and biological action*, reminded us of the many important contributions which the physical chemist can make to the design and perfection of new drugs. The only danger in this approach is that calculations, if not repeatedly cross-checked with experiment, can go far astray. The Baconian revolution of four centuries ago placed Science on an entirely experimental basis, and the progress of Science without constant reference to experiment is, by definition, impossible.

Discussion, throughout the present Symposium, was very good and it grew in intensity as the conference proceeded. There can be no doubt that

this meeting has taken place at a magical moment in the history of our subject, namely at the time when the first agonist-receptor, namely the one for acetylcholine, has been isolated and purified.

The Società Italiana di Scienze Farmaceutiche has earned the thanks of all participants by the splendid organization of the programme and also the social events (formal and informal) during which many valuable personal contacts were made.