Comments and Communications

The Medical Sciences Information Exchange of the National Research Council

THE MEDICAL SCIENCES INFORMATION EXCHANGE was established on July 1, 1950, in the Division of Medical Sciences, National Research Council, to act as a clearinghouse for medical research in progress supported by grants and contracts. The exchange was initiated by those government agencies supporting such research in medical and allied fields, and it later developed within the Public Health Service as the Office of Exchange of Information. Placing the exchange within the National Research Council was effected to simplify the mechanism of its support by a variety of agencies and to promote its wider usefulness.

Although the exchange derives its total support from government agencies, its work has been made possible in large measure by the interest of both public and private foundations, which have from the beginning furnished material and maintained close liaison with its activities. The services of the exchange are freely available to all cooperating agencies and are not solely dependent upon financial contributions.

The functions of the exchange are defined in its charter as ". . . the accumulation, organization, analysis and distribution of information concerned with current research in medical and allied fields. Information may not be released in any form or to any person not authorized under the charter, or . . . (without) the approval of the investigators or agencies concerned."

To all cooperating agencies the following information is routinely available:

1. Amounts and sources of support for geographical areas, research institutions, their departments, and investigators.
2. Amounts and sources of support for the broad and specific areas of research listed in the subject index developed in the Medical Sciences Information Exchange.
3. Lists of investigators and institutions engaged in special types of research.

In addition, the exchange serves both granting agencies and investigators by furnishing data in a variety of ways and by bringing together related research conducted under varied auspices and at widely separated locations. Investigators are turning to the exchange in increasing numbers for information concerning possible sources of support and for knowledge of other workers with similar interests. Granting agencies are using the exchange to learn of additional investigators qualified to perform desired research and for direction to areas of investigation that have meager, or possibly no, support.

It should be emphasized that the exchange performs no publicity function and that none of its material is available for publication or publication reference. It serves only qualified investigators and agencies as a source of information concerning work in progress that may not have reached the publication stage.

The policies of the exchange are controlled by a Policy Committee composed of the heads of the granting divisions of the government agencies supporting the operation and of the Division of Medical Sciences, National Research Council. It is planned to enlarge the committee in the near future to include membership from the public and private groups. At a recent meeting of the Policy Committee it was agreed that the body of material should be enlarged to include the intramural programs of the government agencies, and steps in this direction have already been taken. Many investigators have either visited or written the office and have been placed in contact with other investigators whose interests lie in related fields of research. This has resulted in a growing trend on the part of investigators to report their work to the exchange, and it would seem that intramurally supported research in universities will thus become integrated in the program.

The summaries of research in progress upon which the exchange is based are prepared by the investigators performing the work. Each investigator is fully informed of the purposes for which his summary is requested, and his results are thus protected from premature publication or publication reference. Further, he is requested to omit confidential data and is never asked for a statement of accomplishment or progress.

Those who believe that a free interchange of scientific information is essential to scientific health and growth will have no doubt of the value of an operation that is not limited by organizational boundaries and that cuts across all administrative lines to relate research activities in even one rather ill-defined field such as medicine. And those of us who have taken part in the development of the exchange from a circulation of uncorrelated lists of awards to an organized and integrated body of information have an even deeper respect for its value and its present and ultimate usefulness.

There are today more than 3,000 active research projects recorded in the exchange. These projects encompass a representative sample of investigations supported by all granting sources except industry, which is financing considerable basic as well as applied research, and except local foundations supporting work in single institutions or within limited geographical areas. The exchange has very little information on active research conducted without the aid of some form of grant or contract funds, and it has become evident that the volume of work carried on in this way is considerable. It is recognized that the cost of research in the latter category is intangible, and, although this is not the place to discuss the form or extent of reporting, the exchange desires only in-

formation relative to the problems, investigators, and institutions involved. Indeed, all information concerning the amount of support is supplied by those agencies making the awards; neither investigators nor research institutions are burdened by inquiries of this nature.

Obviously the usefulness of the exchange will increase through the active cooperation of greater numbers of investigators and of granting agencies, and it is hoped that all granting agencies, including industry and the more restricted foundations, will join in the endeavor. Organizations and individuals interested in cooperating are invited to address inquiries to the Medical Sciences Information Exchange, NRC Division of Medical Sciences, Room 1113, Dupont Circle Bldg., Washington 6, D. C.

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Book Reviews

Pharmacological Basis of Penicillin Therapy. Karl H. Beyer. Springfield, Ill.: Thomas, 1950. 214 pp. $4.50.

This book is concise, well documented, and describes in some detail the pharmacological basis of penicillin therapy. It is sufficiently broad to appeal to the investigator in the field of antibiotics, yet simple enough to be of interest to the casual reader of scientific literature or to the busy practitioner who is interested in the "why" of the pharmacological action of penicillin.

Seven chapters treat the pharmacology of penicillin in a logical order, beginning with the factors influencing absorption and distribution in the tissues, outlining the problems presented because of the rapid urinary excretion of penicillin, and concluding with a description of the attempts to alter this excretion through use of combinations of penicillin and carinamide. The latter studies are thoroughly discussed. Numerous descriptive figures and charts break the monotony of the printed page and contribute extensively to the value of the work. Well-chosen references following each chapter give available source material for those interested in a more extensive perusal of the subject.

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Ion Exchange Resins. Robert Kunin and Robert J. Myers. New York: Wiley; London: Chapman & Hall, 1950. 212 pp. $4.75.

This relatively brief book by two highly qualified men represents an attempt to summarize the rapidly expanding field of ion exchange with synthetic resins. With its more than 600 references it can serve as a good guide to the literature (through 1948), and the authors appear to have succeeded in their purpose to "assemble, digest and classify a sizable portion" of ion exchange information. The book will probably find many friends among people interested in the application of ion exchange to industrial processes, while those interested in research in this field may find the longer treatise edited by Nachod somewhat more satisfactory.

This reviewer feels that the chapter on ion exchange theory suffers the most from the brevity of the style. One could have wished that the authors had included in this chapter a more critical evaluation of the various theories. More information regarding their relative merits would have helped greatly to orient the thinking of those unfamiliar with the field.

As is common with first editions, the book contains a number of misprints and errors, and some special terms (e.g., "symmetry ratio," "exchange potential") are inadequately defined. However, these are not sufficient to impair the usefulness of the book to those interested in rapidly acquiring a general background on ion exchange.

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Pituitary-Adrenal Function. A symposium organized by the Section on Medical Sciences of the AAAS and presented at the New York meeting on December 28–29, 1949. Washington 5, D. C.: American Association for the Advancement of Science, 1950. 211 pp. $4.00; prepaid orders from members, $3.50.

The present intense interest in the interrelated functions of the anterior pituitary and the adrenal cortex determined the topic of this symposium of the Section on Medical Sciences of the AAAS. This book contains brief reports of nearly all the topics discussed in the meeting.

In a brief introductory chapter, G. A. Perera emphasizes that adrenal cortical secretions, like drugs, initiate no new cellular functions but act as regulating agents. Up to the present there is only a modest accumulation of fragmentary knowledge concerning the cellular functions which are regulated. C. H. Li discusses in some detail the chemistry of active peptides derived from the presumed protein hormone, ACTH, by peptic digestion. Evidence is offered for the conclusion that the peptides have an average molecular weight of 1,200 or less and an average length of 7–9 amino acids. One fraction, isolated by partition chromatography on paper, was about twice as active as