

BOOK REVIEWS

Canadian Cancer Conference, Vol. I, Proceedings of the First Canadian Cancer Research Conference, Honey Harbour, Ontario, June 16-19, 1954, edited by R. W. BEGG. Academic Press, New York, 1955, xii + 443 pp., illus., \$ 8.80.

The present volume contains the thirty-three papers read at the First Canadian Cancer Research Conference. The policy of this conference was to provide the individual research worker with a number of selected topics on cancer research. The result of this effort is a lot of interesting material, condensed in reviews of both general and more specialized character.

The first section of the book is devoted to ten papers on the biological and pathological aspects of experimental tumours. H. B. ANDERVONT's paper "The biological background for experimental work on tumours", in which spontaneous and experimentally induced tumours in relation to genetic and hormonal factors is dealt with serves as an excellent introduction to this item. P. E. STEINER gives a "guess" on the nature of cancer as a highly pathological pregnancy, whereas Histology (W. S. HARTROFT), Cultivation (R. C. PARKER, M. I. ARMSTRONG AND A. C. WALLACE) and Classification of Tumours (J. ENGELBRETH-HOLM) are further dealt with. The biochemically interested reader is presented with three papers on chemical carcinogenesis in this section (J. A. MCCARTER, S. C. SKORYNA, J. P. W. GILMAN AND D. VESSELINOVITCH).

The second section deals with tumour-host relations (including an informal discussion on Cancer of the Lung: statistical aspects by A. J. PHILIPS and environmental aspects by W. C. HUEPER). In this section metabolic and endocrine aspects are stressed, and three short papers on normal metabolism are included to give a better understanding of the "abnormal" reaction of the cancerous animal. G. B. MIDER discusses some tumour-host relationships, *e.g.* the concept of the tumour as a nitrogen-trap, and he stresses the importance of *in vivo* studies to see what cancer cells actually do in their normal environment. As a more specialized item, the effect of tumours on lipids of the host (H. D. McEWEN) is included. After an introduction on some nutritional aspects of tumour-host relations, E. W. McHENRY discusses the work done with his colleagues on the glutamic acid metabolism of the host. Further topics in this connection: liver enzyme activities and endocrine studies, stress, and immunological problems are covered by R. W. BEGG, H. SEYLE and R. H. MORE, respectively.

In the next section, *Enzymes and Cancer*, carbohydrate and nucleic acid metabolism receives particular attention: historical aspects by R. J. ROSSITER, pathways of glucose metabolism by V. R. POTTER, J. H. QUASTEL and E. S. GORANSON. POTTER discusses the control mechanisms of the alternative metabolic pathways, biosynthesis and breakdown, in connection with growth and inhibition thereof. QUASTEL covers the general aspects of glycolysis and respiration and GORANSON deals with phosphorylase activities of tumours and tumour growth in alloxan-diabetic rats. Biochemical changes in pre-cancerous tissue (rat liver during butter yellow feeding) as evidenced by cirrhosis, fluctuations in cellular population, lowered mitochondrial content and changes in enzymic equipment and building blocks, form the interesting material of two papers by A. CANTERO and C. ALLARD. Three articles on nucleic acid metabolism and the effect of chemotherapeutical agents hereupon follow (H. E. SKIPPER, A. F. GRAHAM AND L. SIMINOVITCH, R. DAoust AND G. DE LAMIRANDA).

The book ends with a section devoted to ionizing radiations, in which H. E. JOHNS provides the reader with the physical basis. Next to this, the paper of W. R. FRANKS *et al.* bears the somewhat unorthodox title "Radiation Chemotherapy of Tumour". This is a report of a new approach to the experimental therapy of cancer, in which an administered non-toxic chemical substance is converted into a toxic product *in situ* by means of radiation. J. FURTH's account of the induction of tumours by ionizing radiation forms the last entry of this book, in which a lot of very interesting and stimulating information is collected and which enables the cancer research worker to cover more easily some of the diverse approaches he is confronted with at present. It is hoped that Volume I may be followed by many more at regularly intervals.

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