"It is imperative (1) to continue the study of the biology of the tumor cell, particularly human, in the fields of karyology, metabolism of substances, and physico-chemical properties, (2) to extend work on the elucidation of the possibility of isolating the factor of malignancy from mammalian cells.

"On the most important question of precancerous states are being conducted numerous investigations. Side by side of extensive clinical observations on the understanding of precancer, the question was enlightened by morphologic, experimental, biologic, and biochemical points of view. On this were received certain new data on the general and local changes in the organism during the precancer period.

"The question requires further detailed study in close collaboration with the clinic.

"On the question of resistance and disposition to cancer the following results were reached: (1) It was established that the organism possesses resistance to malignant neoplasms: the stimulation of this characteristic of the organism constitutes one of the most important problems in the war against cancer. (2) It was established that active mesenchyme plays an essential role in the protection of the organism to blastomatosus growth (a view introduced by Acad. A. A. Bogomolov 14 years ago). (3) The stimulation of active mesenchyme by doses of specific cytotoxic serum restores the carcinolitic property of serum of patients with cancer, which points toward the possibility of achieving a beneficial effect on the mesenchyme of patients with cancer. (4) Data were presented allowing the suggestion that the increase in immunity to malignant tumors is associated with an increase in oxidizing processes and lowering of glycolytic processes, and, conversely, lowered resistance is associated with depressed tissue respiration and increased glycolysis.

"Essential are (1) further studies on the role of active mesenchyme in the pathogenesis of malignant tumors, (2) further studies on the action of cytotoxic antimesenchymal serum on the organism with the objective of developing methods of prophylaxis of recurrences and metastases and general treatment of cancer, (3) further studies in the question of specific immunity to malignant tumors, on the antigenic properties of the cancer cell, and possibly anti-tumor vaccination, (4) further studies of the bio-physico-chemical nature of the immunizing substance to malignant tumors.

"New experimental results were presented showing the role of the nerve component in the distribution of metastases. Further wide study of this question is essential, as well as of the whole problem of the nervous system in the origin and course of tumors.

"Reports were presented on the subject of cachexia in cancer, from clinical as well as experimental standpoints.

Special attention was devoted to the importance of full-value protein and vitamin diet in patients with cancer. Further work on the pathogenesis of cancer cachexia through investigations in metabolism is essential.

"For the guarantee of the possibility of extending the investigations noted above, the convention considers essential: (1) Organization of laboratories of organic synthesis for the production of carcinogenic and anticarcinogenic chemical compounds. (2) Organization of laboratories for biologic investigation, on animals, of the possible carcinogenic action of compounds suspected of possessing such properties and having importance in industry or which may be widely used by the general population. (3) The initiation of studies, in special oncological institutes, on the problem of biologic and chemical methods of cancer therapy and the study of methods of biologic diagnosis. (4) It is considered desirable to obtain from the United States or France a series of homozygous strains of mice and other laboratory animals and to assure their maintenance in several central laboratories. (5) To procure strains of tumors that are important for experiments and not available in the U.S.S.R., (6) To initiate the problem of producing new strains of tumors (of dogs, monkeys, and other animals). (7) To develop methods of producing tumors by chemical products in new types of animals."

Michael B. Shemin


The "Dictionary of Bio-Chemistry," as stated in its preface, was designed for readers of biochemical literature. The book is a cross between an alphabetical glossary and something resembling a condensed encyclopedia. However, whether a book of this type is a mere glossary or an encyclopedia, its value depends entirely upon its degree of accuracy in defining biochemical terms and compounds. This book contains misleading information and so many inaccuracies and poor definitions that, despite some good but brief articles, it cannot be recommended for readers of biochemical literature. To mention only a few of its shortcomings and errors, coenzyme I is said to be a mononucleotide and not differentiated from coenzyme II; lysozyme, which is a protein, is stated to contain no nitrogen; and urea is said to react in vitro with glycine to form glycozyme. Also, the configuration of some of the natural amino acids is sometimes said to be (levo-) and sometimes dextro-. Anyone wishing to understand the recent controversy over Kögel's theory on the occurrence of d-amino acids in tumors would find this book a hindrance rather than an aid.

David Shemin

Correction

The authors of The Metabolism of Normal and Tumor Tissue (3:73-87, 1943) request that the following correction be made. It is made thus tardily because their first letter respecting it was lost in transit.

In Tables III and V the second column, which now reads:

Liver tumor

" "

""

etc.

etc.

should read as it was in their manuscript:

Liver

Tumor

Liver

Tumor

etc.,

the first horizontal line of figures giving the results with liver tissue, the second horizontal line the results with tumor tissue, and so on.

David Shemin

*Cancer Res* 1944;4:72.

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