sponse follow in the second chapter where solutions of first- or second-order systems are presented for a number of source functions. The third chapter is a 27-page digression into the fascinating area of analogues and duals. Lagrange's equations of motion and electromechanical systems are treated briefly in this chapter. Following the chapter on Heaviside-Jeffreys' operational calculus, there is a treatment of the Laplace transform method. Here Weber relies rather heavily on physical justification for mathematical operations, but he is careful to point this out. The indicial response function is given importance as the key to the solution of linear transient problems involving arbitrary driving functions. The last chapter is concerned with the spectrum concept and takes up Fourier series and Fourier integrals. The treatment of what might be called nonideal periodic wave forms is a unique feature of this chapter.

There is a generous appendix of six parts: "Notation, symbols, and glossary"; "Electromagnetic fields and energy relations"; "Determining roots of polynomials"; "Matrices and determinants"; "Functions of a complex variable"; and "General bibliography." The bibliography is excellent and the footnoting of the volume is unusually liberal. Weber's prose reads well and appears to be quite adequate for its purpose.

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Connective Tissues. Trans. of the Fourth Conference, Feb. 18–20, 1953. Charles Ragan, Ed. Josiah Macy, Jr., Fdn., New York, 1953. 197 pp. Illus. $3.75.

The informal conversational style of these conferences is again followed in this meeting. The chapter titles indicate in only a very general way the content. They are "General areas of agreement reached in this conference group"; "Isolation and characterization of mammalian striated myofibrils"; "The effect of vitamin A on organ cultures of skeletal and other tissues," and "Outline of problems to be solved in the study of connective tissues."

The first chapter is extremely interesting in that it brings out the almost abysmal problem of word meaning and the difficulties in communication that necessarily follow. The discussants formulated an outline related to connective tissues, but they had only "relative unanimity" and not real agreement on the concepts involved. In my opinion a statement by one of the discussants very nearly summarizes this chapter:

> I think we are quibbling. We are reaching the point where we are merely using words and I think none of us knows what he is talking about.

The next two chapters are concerned with some extremely interesting observations on myofibrils and the effect of vitamin A on certain tissues. The pertinence of these subjects toward increasing our understanding of the scope and function of connective tissues seems rather remote.

The last chapter is devoted to a discussion of the problems of the structure and function of connective tissue. Reference is made to the difficulties encountered in trying to correlate the observations of the histochemist and biochemist on the localization and content of connective tissue substances. One of the most interesting problems advanced was that of whether the parenchymatous structures depend on the surrounding connective tissue stroma for their functional capacity. This concept was discussed by Gersh and Catchpole in 1949 and has since been beautifully elaborated upon by them and others.

This little volume is interesting but is not a valuable addition to this field.

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Grundlagen und Praxis chemischer Tumorbehandlung. Zweites Freiburger Symposion an der Medizinischen Universitäts-Klinik. J. Pirwitz. Springer, Berlin, 1954. 289 pp. Illus. Paper, DM. 45.

Cancerization of cells is an irreversible process consisting of damages that gradually involve a great many self-duplicating cytoplasmatic particles of macromolecular structure (Druckrey) and result in preinvasive intraepithelial carcinomas of ½- to 20-yr duration (Schubert). Cancer is not a problem of heredity (K. H. Bauer). Cancer in adults might be the response to agents that acted in childhood. [It is apparently unknown in Germany that this was already recognized and proved in 1939 (S. Peller, *Cancer in Man,* International Univs. Press, New York, 1952, pp. 307–310)].

Most anticancer agents are cytostatica. They attack growing cells during the late interphase, when deoxyribonucleic acid is being duplicated (Marquardt). True mitotic poisons are rare. Within the limits in which rapidly multiplying normal tissues are not severely damaged, the available agents do not kill cancer cells but weaken them enough to give the broken-down defense mechanism a chance (Lettré, Domagk). Mutations of the treated cancer cells cause the diminishing effectiveness of therapy (Burchenal). Since the chemical deviations of the cancer cell from the normal cell are too small, development of cancer-cell-specific poisons is unlikely. Cytostatica have much in common with x-rays (radiomimetica, Boyland). Surgeons should utilize chemotherapy against cells disseminated during operation, and so forth (Kraus). So far no human cancer was cured by chemotherapy (Heilmeyer, Pirwitz). Cures of prostatic cancer might be achieved by modification of chemotherapy—by intravenous administration of large amounts of inactive stilbestrol diphosphate that is split and activated in all prostatic cancer cells (Raabe, Rockstroh, Brock).

This symposium created an opportunity for an inspiring and fruitful exchange of ideas on matters essential to every cancer investigator.

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