benedryl, histadyl, neoantergan, and pyribenzamine. The following pathogenic fungi were routinely used in these tests: *B. dermatitidis, Coccidiodis immitis, Trichophyton rubrum, Candida albicans,* and *Cryptococcus neoformans.* All the antihistaminics tested exhibited fungicidal properties, but thephorin and benedryl were the most potent. We submitted the manuscript first to a bacteriological journal and then to a pharmacological journal, but the paper was not accepted by either journal because, it was contended, the findings did not sound scientific. Discouraged, we decided not to publish our findings.

Now that two papers have been published on the fungicidal properties of antihistaminics confirming our earlier findings, in the interests of science we wish to state that

1) All antihistaminic compounds possess inhibitory effect on fungi.

2) The editors of scientific journals and their consultants must not turn down or refuse to publish a paper simply because the findings do not comply with their trend of thinking. They should use a scientific approach, free of prejudice, in accepting or refusing a manuscript. Opinionated thinking stops or delays progress.

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Book Reviews

Nerve Impulse. Transactions of the first conference, March 2–3, 1950, New York. David Nachmansohn, Ed. New York: Josiah Macy, Jr. Foundation, 1951. 159 pp. $3.00.

Because of the enormous number of papers presented at national scientific meetings many sections must meet simultaneously. Lack of time and organizational difficulties do not favor critical discussions. This condition, aggravated by inadequate space in some of our leading journals and perhaps by some arbitrariness in editorial policies, accounts for the fact that our scientific archives become more and more storehouses of facts without proper correlation and evaluation of the data. Under these circumstances the venture of the Macy Foundation, of bringing leading scientists together for an informal discussion of important problems, is a laudable undertaking.

Nerve Impulse inaugurates a new series and covers several important topics. Grundfest introduces "Potentialities and Limitations of Electrophysiology," and Quastel deals with the biochemical approach to the problem of nerve conduction. This problem is further elucidated from the viewpoint of comparative physiology by Prosser and in its histological aspect, particularly with regard to synaptic transmission, by Bodian. A report on ion exchange and permeability concludes the book. The discussion is carried on at a very high level, and many more problems than are indicated by the review titles are competently dealt with. Some improvement in procedure and presentation seems desirable, however. Particularly in the first section, the discussion is rather turbulent and jumps too much from one topic to another as a result of lack of guidance by the chairman. This must have been felt by the participants, since in the last section the discussion is omitted but "incorporated" in Steinbach's report. The reprinting of a competently guided discussion that would steer between these two extremes would appear to this reviewer most helpful. It is further suggested that the references might be handled uniformly throughout the book. In spite of these criticisms this is a publication rich in information and in ideas.

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Physik und Chemie des Zellkernes. Protoplasma-Monographien, Band 20. Petr F. Milovidov. Berlin-Nikolassee: Naturwissenschaftlicher Verlag, 1949. 529 pp.

Although the publication date of Milovidov's monograph is 1949, the author informs us that he wrote it in 1938–39 and managed to make some changes up to 1943. Completed about the time when the present tide of interest in the physical and chemical behavior of the cell nucleus was just beginning to rise, it can hardly be expected to reflect those specific problems that are the occasion of such intense activity today. Prague could hardly have been the ideal place to look into the future of nuclear physiology during those years.

Biology being more of a cumulative science than some others, a thorough work such as this retains value and even timeliness without being up to date. Bandwagons change more rapidly than tunes. In the case of nuclear function, most of our current viewpoints are restatements in chemical, and therefore more precise, terms of ideas derived earlier from microscopic observation. Thus, the hypothesis supported by tracer experiments, that a major activity of the nucleus is the synthesis of ribonucleic acid for deployment in the cytoplasm, is the heir to the older "chromidia" hypothesis, based on numerous descriptions of the passage of basophilic particles from nucleus to cytoplasm. In Milovidov's work, such older hypotheses are discussed thoroughly and with reference to a great wealth of specific cases. Milovidov's monograph merits serious study by those who are

interested in the cytological background to the interplay of cytology and biochemistry.

This work is more valuable, of course, in those areas that have tended to be neglected in recent years. For example, more than 30 pages (including 15 pages of tables!) are devoted to summarizing the results of attempts to stain nuclei vitally. A really successful solution of this problem would be a great asset, and such a conscientious summary of past experience is invaluable. Similarly, workers on cell division will appreciate the 5 pages of tables detailing the duration of various mitotic phases in a wide variety of materials.

The weakest aspect of Milovidov's book is the treatment of its stated subject—the physics and chemistry of the nucleus. Three hundred-odd pages are devoted to physics, some 60 to chemistry. What is reflected is the dominant fashion of a period in which it was felt that special merit attached to the assignment of a numerical value to any physical property of a biological system, however irrelevant to biological problems, and the restatement of visual observations in the language of the colloid chemistry of the time. A more recent book on the same subject would probably reverse the relative emphasis on chemical and physical aspects, and it is wholesome to wonder how this would appear in the same perspective.

Unfortunately, this volume lacks what would be a most valuable bibliography, whose publication is promised as part two of the complete monograph.

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Reviewed in Brief

The Physical Basis of Life. J. D. Bernal. London: Routledge and Kegan Paul, 1951. 80 pp. 6s.

One point not often dealt with in works concerning the origins of life is that of the genesis of organic compounds, especially those with a complexity comparable to that of proteins. Professor Bernal starts his monograph by outlining this problem and then considers some possible mechanisms in a frankly speculative but stimulating fashion. The title may be misleading because this work, a Guthrie lecture, deals almost entirely with the origins and early organization of biological processes. The discussion might be divided into the following sections: Possible ultraviolet photosyntheses, the rise of an organic molecule population, the initiation of living processes, the development of photosynthetic life, and, finally, some remarks on the organization of cellular processes. Throughout, the discussion is admirably annotated by N. W. Pirie.

The Structure and Mechanical Properties of Metals. Bruce Chalmers. New York: Wiley, 1951. 132 pp. $3.50.

This brief monograph, the second in a series on the structure and mechanical properties of metals, published under authority of the Royal Aeronautical Society, deals first with the structure of pure metals, using evidence from x-rays as well as heat treatment and etch figures. It then discusses the structure of alloys, making ample use of equilibrium diagrams and a brief outline of problems as they are encountered in disordered alloys and in diffusion.

Age hardening is illustrated in aluminum copper and copper beryllium. A chapter on the effect of the distortion of structure, using modern ideas about dislocations and surface arrangements, is followed by material on heat treatment, and this, in turn, is followed by a chapter on structure determination. The monograph closes with a discussion of the mechanical properties and their dependence on structure. The text is nonmathematical throughout and should be useful for engineering students and practical engineers as an introduction to the modern concepts of structure and metallic properties.

Selective Toxicity with Special Reference to Chemotherapy. Adrien Albert. New York: Wiley; London: Methuen, 1951. 228 pp. $1.75.

Biologists generally should find this little book an extremely useful guide to the physiological action of a variety of organic compounds. In many ways the volume complements the recent monograph of Danielli because, where Danielli deals largely with the theoretical aspects of cell pharmacology, this book approaches such problems from a practical or experimental viewpoint. The subject matter differs from a pharmacological review in that it presents information from the fields of microbial, insect, plant, and animal physiology. The fact that the author is able to relate the problem of selective toxicity to so widely separated groups of living organisms is most commendable.

The monograph starts with a consideration of a definition of selective toxicity and the feasibility of such an action. The complexity of the subject matter is such that probably an empirical approach, such as that adopted, is best at the present time. The chapter dealing with the physiological effects of hydrocarbons and other nonreactive substances is perhaps least satisfactory, because it is here that theory can best be applied. Viewed as a whole, however, the work is a most satisfactory contribution.

Scientific Book Register

Radiations from Radioactive Substances. Reissue. Sir Ernest Rutherford, James Chadwick, and C. D. Ellis. New York: Cambridge Univ. Press, 1951. 588 pp. $11.00.

Totem and Taboo. Some Points of Agreement between the Mental Lives of Savages and Neurotics. Sigmund Freud; authorized trans. by James Strachey. New York: Norton, 1952. 172 pp. $3.00.

The Chemistry and Technology of Food and Food Products, Vol. III, Rev. 2nd ed. Morris B. Jacobs, Ed. New York–London: Interscience, 1951. Pp. 1,773–2,580. $15.00.

Fundamentals of Automatic Control. G. H. Farrington. New York: Wiley, 1951. 285 pp. $5.00.