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Book Review - *Regeneration*

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Book Review

Regeneration. S. Meryl Rose. Meredith Press, New York, 1970, X, 264 pp., illustrated. \$7.95.

Within the last decade, the explosion of knowledge in the sciences and particularly in the developmental genetic aspects of the biological sciences has left an ever larger knowledge gap between the experts in the various facets in the sciences and the general public, including the young who will be trying to solve the problems in the near future. This book, *Regeneration*, purports to have been written to help bridge the gap in the area of regeneration as a key to the understanding of normal and abnormal growth and development.

This book begins with a well-written introduction to the genetic theory of cellular differentiation. This section presents a short, concise, well-documented description of the relationship between the genetic code and cellular differentiation. Primarily the chapter presents the various models of gene action and their roles in differentiation during embryonic development. This section presents an excellent summary and bibliographic source for genetic-embryonic interaction activity. The material, as presented, however, would seem to be less than adequate for the "general public individual" beginning in the field unless he were to supplement his study with other source material which was more fundamental.

After this initial section, which traces studies in classical and molecular genetics which led to the modern concept of cell differentiation, Dr. Rose devotes several chapters to de-

scribing experiments on polarized regeneration and control mechanisms acting on regeneration processes in a variety of organisms. These include polarized development work in the amphibian limb, in the cortex of Protozoa, in embryos in general, regeneration in coelenterates, and the mechanisms of control message-transfer in plants and worms.

It is necessary to mention that in each of these chapters Dr. Rose has done an excellent job of synthesizing all major research results into a well-written, documented, interesting presentation useful to those already familiar with the jargon of the developmental sciences, but somewhat difficult for the general public to comprehend.

In the final section of this book, Dr. Rose makes a comparison between the processes that lead to normal growth control and differentiation with those that lead to never ending tumor growth. He presents a well-balanced consideration of the heredity-environment issues which permeate all discussions of cancer.

In summary then, I would recommend this book very highly as a source of information for the individual who needs an overview understanding of developmental processes and is already familiar with the vocabulary of molecular genetics and developmental biology or for the individual who intends a detailed study of the subject and can make use of the extensive bibliography that Dr. Rose has compiled.

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