

Preface

As the title denotes, the purpose of this monograph is to describe the evolution of ideas relating to the mechanism of muscular contraction since the discovery of sliding filaments in 1954. The topic has been approached in its historical development with an emphasis on ideas, techniques, experimental results, and the investigators who generated them. In order to provide perspective into the thinking about an issue at the time of its discovery, often the investigators describe in their own words an important result or conclusion as it appeared in an original paper. Also numerous figures from the original papers are included in order to allow the reader to see the data that led to important conclusions. A unique feature of the book is the inclusion of information about the scientific background of many of the investigators with the intent of providing deeper insight into their point of view on a subject. An amazing variety of experimental techniques have been employed to investigate the mechanism of muscular contraction and relaxation. Some background of these various techniques is presented in order to gain a fuller appreciation of their strengths and weaknesses. Controversies in the muscle field are discussed along with some missed opportunities and false trails.

It was difficult to decide where a history of muscular contraction should end. How can one be sure that what has recently been discovered will stand the test of time? Nonetheless to give some insight into current thinking on a particular topic, usually, a recent review is suggested. In some ways writing this book has been a daunting task. No doubt there are gaps and some topics may be overemphasized and others underemphasized. Any gaps and errors are totally my responsibility.

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