

PREFACE

The impetus for this book comes from teaching animal physiology for many years. I found that though most life science and medical students were quite unaware of the antecedents of what they are being taught, they were interested and wanted to know more. *The Rise of Experimental Biology: An Illustrated History* attempts to satisfy this need by providing an overview of the origin and tortuous history of the science of biological function. An underlying theme is that science provides one of many explanations of the how and the why of life processes, but that it is unique because of its methodology—reason and experiment. However, there will be a running commentary that theories of biology do not develop in isolation, but are interrelated with their social context.

It is clearly impossible to hope to cover this story in a couple of hundred pages of text when hundreds of volumes by specialists have dealt with the details. Instead, I attempt to provide the merest sketches of this fascinating history. The elements are perhaps

idiosyncratically selected: some conventional because as keystones they have to be mentioned, others more unusual because I find them amusing and particularly interesting. My approach then is not to give a conventional chronological list of who did what and when, but rather to provide a narrative on the highlights of the evolution of the science of biology.

An early, but important question I faced when organizing *The Rise of Experimental Biology: An Illustrated History* was how to handle references. In a conventional professional manuscript, each statement would be carefully annotated and cross-referenced. But in what is, one hopes, a popular book for general reading, such an arrangement would prove cumbersome; in any event, most of the details are common to the major science histories and readily available. Therefore, I have gathered all of my sources in the reference section of this book and list only particular references that give special information or peculiar points of view.

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