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The procedures described in an article are easy to follow and which require little specialized equipment or expertise. There is often little agreement among papers from different laboratories as to the best or easiest way to perform the same experiment. It is too easy to spend years trying techniques that may not even be the best choices for the experiment at hand.

This book arose after four years of teaching an introductory lab course designed to help physicists, chemists, and engineers work with biology and in supervising a research lab where students come from every type of background from psychology to electrical engineering to physics to math. It is designed to help those who understand science, research, and a bit of basic physics get their hands wet (literally) in a biology lab, both conceptually and practically. The first chapter introduces and reviews the basic biology, chemistry, and physics needed in molecular biophysics, with references in books and articles for more in-depth treatment for those who need more. It then summarizes the types of experiments this book is designed to assist, with a guide to designing a molecular cloning experiment with different downstream goals.

The later chapters are designed to be highly practical. The concepts and vocabulary are introduced but not explained in detail; such knowledge can be obtained from basic introductory texts on the appropriate subject, which are referenced at the end of each chapter. Instead, I outline the key techniques and provide protocols for some straightforward yet potentially tricky experiments. Nearly all of the emphasized techniques are ones that I have performed for many years, or are contributed by other experts in related fields who can provide their insight into the perils and pitfalls of a given approach. When a

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