

Preface

It is mid-January, 2005, and behavioral endocrinology has been in the news a lot this past week. Major League Baseball has finally adopted a tougher steroid-testing program that will suspend first-time offenders for 10 days and randomly test the players year-round. Only the National Hockey League maintains no steroid testing policy among major sporting leagues in the U.S. Anabolic steroids help build muscle and possibly enhance athletic performance, however, at significant health costs.

The New York Times reported that while giving a speech at a scientific conference, the president of Harvard University (who claims he was acting as a *provocateur*), suggested that one of the reasons for the lack of tenured women in academic science and engineering departments and research facilities might be that there are innate differences in the cognitive abilities of men and women. Although this was a provocative statement, and presumably uttered to promote consideration of all hypotheses for the male bias in academic science and engineering departments, it predictably caused uproar among academics and others. It is too early to predict how his statement will affect his ability to serve as president of a major U.S. university. To be fair, he is an economist by training, not a behavioral endocrinologist. There certainly are biologically-based sex differences in the brains of humans, but these small differences are highly unlikely to account for the disparity in the sex ratio in the sciences and engineering.

The field of behavioral endocrinology is a truly interdisciplinary effort. It involves the study of phenomena ranging from genetic, molecular, and cellular levels of analysis to the study of individual and social behaviors. I

had several goals when I began writing a third edition of this textbook, one of which was to continue to present information about the interaction of hormones and behavior from diverse perspectives. I also wanted to pass on to readers more-detailed information about the scientists who laid the foundation for our modern studies of behavioral endocrinology. I have tried to present current hypotheses and theories in the context of their historical origins. Naturally, after five years, the book needed some general updating to remain useful, and I have endeavored to update all chapters to reflect current studies and information. Some areas, such as body mass regulation and circadian rhythm research, are moving forward with rapid advances announced weekly.

One criticism that I have received in the past, especially from colleagues teaching in Psychology departments, is that I have too much comparative work in the text. This is a criticism that I will continue to ignore. The comparative perspective is what gives behavioral endocrinology great strength, and some of the most fascinating aspects of our field come from discoveries gained on nontraditional animal models. I have continued to present this broad comparative approach in this edition. It is my hope that presenting adaptive function along with molecular and physiological mechanisms will yield greater understanding than presenting either approach alone.

I appreciate that many behavioral endocrinology students will be psychology majors. Thus, I have tried to keep the conceptual issues clear, and provide only sufficient details and examples that support the concepts. My assumption is that psychology students will have taken a course in biopsychology or neuroscience by the time they encounter this textbook, but again, I have tried to keep discussions of endocrine physiology and biochemistry to a minimum level necessary to understand the hormone-behavior interactions being discussed. Because students are likely to be familiar with the behavior of common animals such as dogs and rabbits, I have continued to use these animals as examples to help explain many concepts in this text. New to this edition of the text is a student CD that contains some wonderful videos and animations, which I hope help illustrate some of the behavioral and physiological concepts discussed.

Many topics had to be omitted or curtailed in the text. I assume that professors will use additional readings to make up for any deficiencies. Some topics covered in the text are controversial and will likely stimulate class discussions. At the end of each chapter are some questions for discussion that I hope will be potential starting points for such exchanges. A short, updated list of suggested readings is also provided at the end of each chapter where students can find reasonably current and more detailed information on the material in each chapter.

This is a very exciting time to be studying this field—either as a student or as a researcher in behavioral endocrinology. I hope that I have captured a fraction of the excitement I feel for this field and successfully conveyed it to the reader.