

ACKNOWLEDGMENTS PREFACE

The Big Picture: Histology was developed from our collective years of experience teaching human histology to first-year medical and dental students at the University of Utah School of Medicine. Our goal in the histology course always has been to try to provide students with an efficient way of learning, and we now have applied that same approach to this book.

Histology is a science that is important because it extends the structural description of the body to the microscopic level, and provides a physical context for other basic sciences such as physiology and biochemistry. The study of human histology helps to prepare students for their pathology course, in which familiarity with normal tissue architecture is required to recognize the structural changes produced by disease and then to understand and predict the functional consequences of these changes. For example, a detailed knowledge of the construction of the walls of the stomach and duodenum is essential to understand the different roles these organs play in the normal process of digestion and absorption of food. This knowledge also helps to explain why bleeding can be a common and serious consequence if ulcers form in either the stomach or the duodenum.

Through years of teaching, we generated a set of notes that provided our students with a “big picture” overview of the course material, and along the way, we continued to supplement these notes with the results of current research. Later, micrographs were added to some of the material that was developed into handouts for our laboratory sessions. Although we told our students that our notes were intended to be only supplemental and that they would be much better off to ignore them and to read the assigned textbooks thoroughly, they rarely did. The students complained that the textbooks faculty assigned generally contained too much information and detail, and most students simply did not have the time to read through large textbooks and cull out what they needed. Therefore, for the

histology course, they relied on our notes, which they said were clear and concise. These notes were the starting point for this book.

Our goal in this book was to provide text, illustrations, and micrographs that are complete, yet concise, to present the “big picture” of human histology, and to this point, we feel we have succeeded. To illustrate and emphasize key points, we have included detail, often clinical in nature, to better elaborate the correlation between the structural and functional applications of this science. The format of the book is simple. Each page spread consists of text on the left-hand page with associated illustrations on the right-hand page. In this way, students can grasp the big picture of individual principles in bite-sized pieces, one concept at a time.

- Key structures are highlighted in bold when first mentioned.
- Bullets and numbers are used to simplify important concepts.
- More than 400 full-color illustrations and micrographs depict the essential histology. Except as noted, all histological sections were stained with hematoxylin and eosin (H&E) and were photographed by the authors.
- Icons indicate high-yield, clinically relevant concepts throughout the text.
- Study questions and answers follow each chapter.
- A final examination is provided at the end of the text.

We hope you enjoy reading this text as much as we enjoyed writing it!

—Rick Ash

—David A. Morton

—Sheryl A. Scott