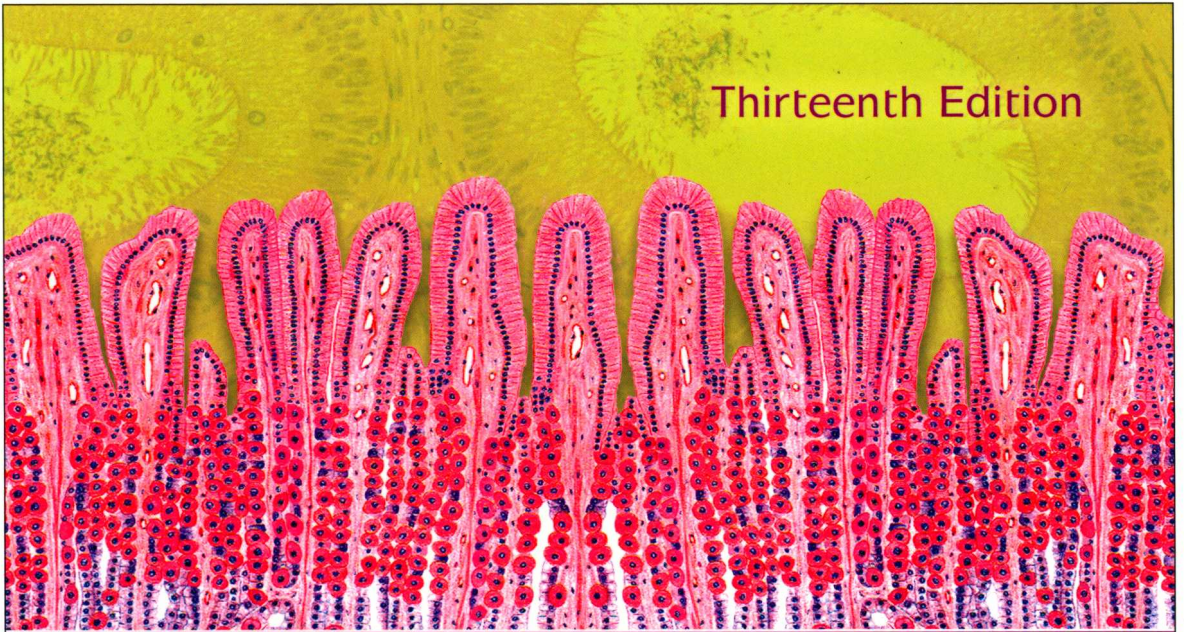


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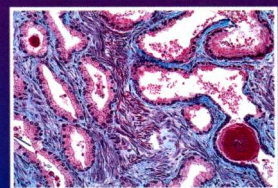
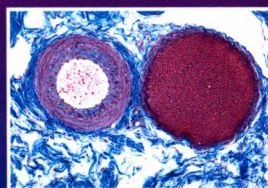
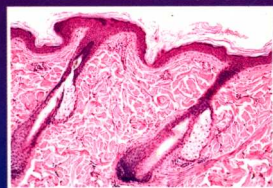
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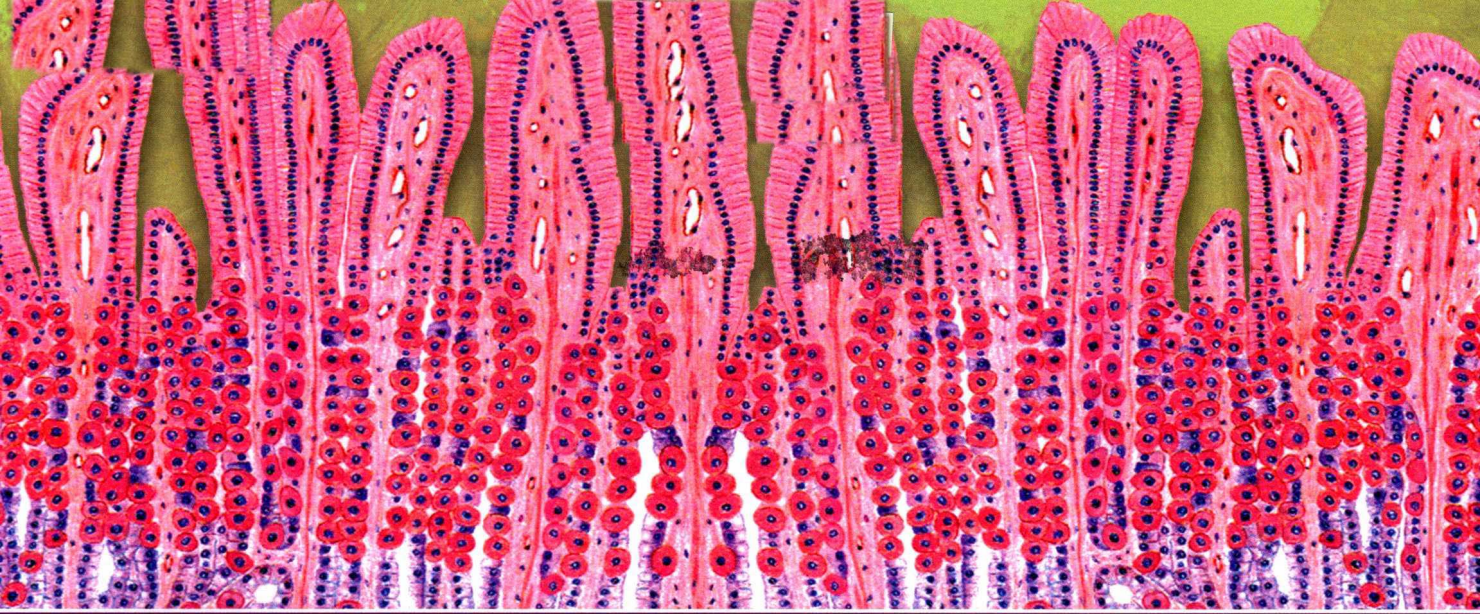
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with Functional Correlations

Thirteenth Edition

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# ATLAS OF HISTOLOGY

with Functional Correlations

Thirteenth Edition



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*Dedicated*

*To those who matter so much*

*Cassidy*

*Declan*

*Beckett*

*Ian*

*McKenzie*

*Sarah*

*Shannon*

*and*

*Diane*

*Kathryn*

*Tatiana*

*Sharon*

*and*

*Todd*

*Joshua*

*Chadwick*

*and most especially and always*

*Elke*



# PREFACE TO THE THIRTEENTH EDITION

The thirteenth edition of *Atlas of Histology with Functional Correlations* (formerly *diFiore's Atlas of Histology with Functional Correlations*) continues to provide a colorful and expanded atlas of histologic images for medical, veterinary, dentistry, and pathology as well as students of the biological sciences.

As in previous editions, numerous comments from reviewers were helpful in suggesting improvement to the text and images of the atlas. Keeping these suggestions in mind, the composite and colorful illustrations of cells, tissues, and organs that made this atlas popular are maintained in the thirteenth edition. In addition, numerous photomicrographs were added throughout. While most of the images were prepared with light microscopy, other images with transmission and scanning microscopy are also included where it was necessary to show more precise and detailed morphology of different structures not visible with light microscopy.

The rapid advance in scientific research continues to produce volumes of new information that further our understanding of fundamental biological functions of cells as well as their subcellular and molecular components. Thus, in our contemporary era, the study of histology requires more than the recognition and identification of structural characteristics in different organs but also learning and understanding their diverse dynamics and functional correlations that maintain the homeostasis of living organisms.

## CHANGES IN THE THIRTEENTH EDITION

- Descriptive text material has been carefully rewritten and updated for more concise presentation and easier understanding.
- Empty spaces have been condensed and replaced by text material and/or images.
- At least eight labeled Additional Histologic Images have been added to Chapters 2 and 3 through 22 to supplement the color illustrations and other histologic images.
- Chapters 2 through 22 now include five End-of-Chapter Review Questions with explanations for correct answers.
- The most important and latest functional correlations concerning the structure and function of various cells, tissues, and organs have been provided in a summarized format for easier reading and better comprehension of the new information.
- Composite lead-in art pages from previous editions have been dispersed throughout chapters to better correspond to their relevant topics.

## LEARNING RESOURCES

The following Student and Instructor Resources are offered at Wolters Kluwer's learning resource center [thePoint®](#).

### Student Resources:

- Interactive Question Bank of more than 250 additional multiple-choice questions not included in the book, with explanations for correct answers

### Instructor Resources:

- Interactive Image Bank including all images from the book with labels and leaders on, labels and leaders off, and labels off with leaders on options



- Supplemental Image Bank including more than 1,000 additional unlabeled photomicrographs not included in the book, organized by chapter; multiple images of similar structures are included
- Syllabus Conversion Guide indicating changes and additions between the twelfth and thirteenth editions.

For more information about accessing and licensing Instructor Resources, please contact your sales representative or visit [thepoint.lww.com](http://thepoint.lww.com).

## ACKNOWLEDGMENTS

I acknowledge the numerous colleagues who have graciously contributed their images to my previous editions of this atlas. In this edition, the donated images are credited with their names and their affiliated institutions. I shall always be grateful to these professionals for their generosity and assistance in improving this atlas.

The cooperation and assistance provided by the staff of the publishing company of Wolters Kluwer is sincerely appreciated. As with numerous past editions, I acknowledge the assistance of Crystal Taylor, my long-time acquisitions editor. I also was given the high privilege of working for the third time in preparing this edition with the most professional freelance editor, Kelly Horvath. Her hard work and dedication to accuracy and the best possible production of this atlas is sincerely appreciated. To all other professional individuals who assisted or were involved in production of this latest version of my atlas I express my sincere appreciation.

## IN MEMORIAM

Since assuming the authorship of this atlas approximately 30 years ago, I have had the pleasure of collaborating with Dr. E. Roland Brown, the medical illustrator who ensured the accurate composition of each histological illustration for this atlas during all of this time. These beautiful color illustrations of numerous cells and tissues made this atlas unique and popular with histology students. As I was preparing the atlas for the thirteenth edition, I was informed that Roland passed away. With Roland's death, the field of medical illustration has lost a very talented artist, and I have lost a close and wonderful friend. The beautiful histologic illustrations that he prepared for all previous editions of the atlas will be enjoyed and appreciated by many students worldwide for many years. His talent will be sorely missed.

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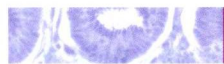
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