Book Review
Compendium of Histology

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Article Summary: This article reviews *Compendium of Histology* by Dr Anders Rehfeld, Dr Malin Nylander, and Dr Kirstine Karnov, a succinct and sufficiently detailed compilation of histology.
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**Compendium of Histology: A book review**

Delving into the intricate world of histology (or microanatomy) can be a daunting endeavour. Histology is a component of medical school training that is frequently assessed. Although medical students can undeniably appreciate its usefulness in determining a pathological diagnosis of disease, the area may be perceived as esoteric. However, as pathology is the basis of disease, an elementary understanding of histology is broadly applicable to all medical specialties. With the exception of pre-clinical laboratory hours, the average medical student has remarkably limited exposure to histology. This compendium (Figure 1) provides an excellent overview of the essence of histological study. It details the normal histological structures of the major organ systems and a practical method with which to study slides.

The authors are Danish-trained medical doctors with experience in histological teaching and an interest in engaging the medical student cohort. Dr Anders Rehfeld, Dr Malin Nylander, and Dr Kirstine Karnov are medical graduates of the University of Copenhagen and commenced teaching histology to students early in their university years. The authors subsequently pursued higher research in areas including male reproductive biology, gynaecological endocrinology, and oral cancer. They have combined their passion for cell biology with teaching to produce a histology reference book, purpose-built for medical students. The compendium uses a straightforward category system (rather than the rote-learning approach often used by students) to render the study of histology largely manageable. Major organ systems are subdivided into classes based on their constituent tissues. As such, each category hosts further partitioned high-yield information. The compendium is divided into four main parts: Introduction (Part I), Cytology (Part II), Histology of Tissues (Part III), and Histology of Organs (Part IV).



Part I describes the properties and the basic organisational structure of cells and tissues. It also includes a practical guide to analysing fresh or frozen specimens and common staining principles. Part II discusses the framework of organelles and their elemental compositions. Part III includes illustrations and photomicrographs of typical sections of the main tissue types. Part IV studies the major organ systems and their components.

The book systematically utilises a dot-point format to relay pertinent information. Distributed throughout the book are "Memo-boxes" which detail unique or interesting acronyms as memory aids to recall key concepts. For example, as shown in Figure 2, when describing the layers of the blood vessel wall, the acronym **AMI** or **A**cute **M**yocardial **I**nfarct would be beneficial: "Tunica **A**dventitia, Tunica **M**edia: The **M**iddle Layer → the smooth **M**uscle cell is the only cell type here, Tunica **I**ntima: The "**I**ntimate" Layer, closer to lumen." The book also includes stylised illustrations of key structures and photographs of specimens to aid comprehension. Furthermore, the authors should be commended for their consistent minimalistic page design and clear graphics. At each chapter's conclusion, the authors have provided a number of references, which serves the dual purpose of providing scholarly support for the material while, also directing the reader to further resources. Most importantly, students with no prior knowledge of the basics of histology or self-visualisations of tissue specimens will find this book highly informative. This is principally due to the scrupulously crafted summary of the foundations of histology, provided in a categorised shorthand format. As the compendium follows a rudimentary approach of the tissues of the human body, these basic principles can assist with understanding pathological changes when students transition to clinical years.

This book is an ideal companion for medical students learning histology and for revision prior to examinations. With a concise overview of the main organ systems and no extraneous material, the book perfectly achieves its set purpose. Furthermore, it may prove of value to junior doctors, pharmacists, or academics wanting to re-establish their grounding in the fundamentals of the human body. In comparison to other histology texts or guidebooks, the compendium, by its very definition, cannot include the rare or extraordinary. Individuals seeking more comprehensive information as they progress further into their medical education should utilise this book as a supplementary tool. Wider reading would benefit medical students who are interested in understanding conditions commonly encountered with particular pathological processes.

The English version of this Danish histology reference book is a perfect addition to a medical student's personal library and a highly recommended core textbook for final examination preparations. As most Australian medical university libraries have subscriptions to academic e-books, such as SpringerLink, the book would likely be an expense-free venture for students. It would be invaluable to those wishing to establish a foundation in histology and those who have a special interest in pathology.

References

[1] Rehfeld A, Nylander M, Karnov K. Compendium of Histology: A Theoretical and Practical Guide. Switzerland: Springer International Publishing AG; 2017.

*Figure 1. Cover Page of Compendium of Histology.*

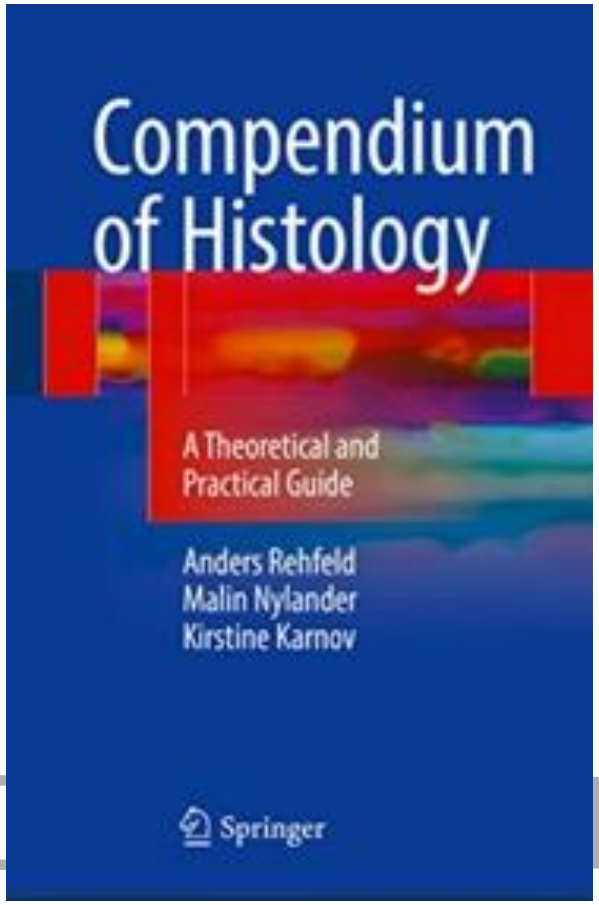




*Figure 2. Memo-Box describing the memory aid acronym "AMI".*

**MEMO-BOX**

The layers of the blood vessel wall are remembered by **A**cute **M**yocardial **I**nfarct (**AMI**):

- Tunica **A**dventitia
- Tunica **M**edia: The **M**iddle layer → the smooth **M**uscle cell is the only cell type here.
- Tunica **I**ntima: The "**I**ntimate" layer, closest to lumen.