

# J.A. Kiernan. Histological and Histochemical Methods: Theory and Practice

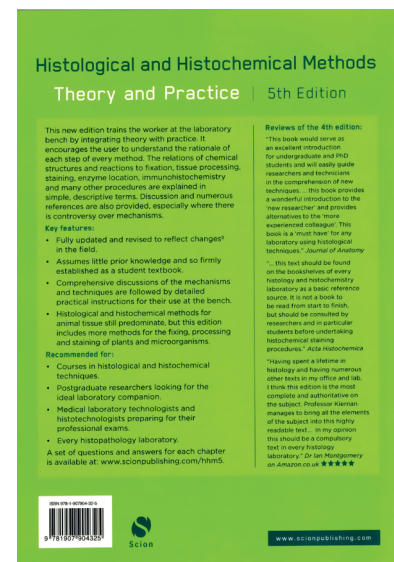
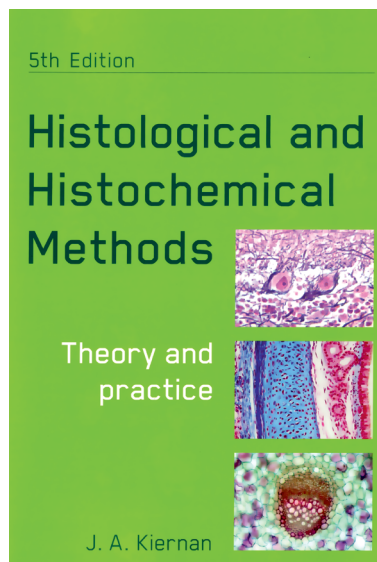
5<sup>th</sup> edition, Scion Publishing, 2015, 571 pp.

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The fifth edition of this leading work on histological and histochemical techniques affirms its position as a key reference book for all those involved with histological preparations and applications, from the student to the experienced laboratory investigator. As in earlier editions (1981, 1990, 1999, 2008), the new edition aims to teach the chemical, physical, and biological principles of fixation, staining, histochemistry, and immunohistochemistry. For most of the described staining methods, the theoretical explanations and practical instructions are closely integrated. This allows an intelligent approach to the choice of the best visualization technique for the types of cells or tissues under study.

The overall structure of the book remains unchanged, but the content of the 20 chapters has been thoroughly revised and updated to reflect recent technological advances. As with the fourth edition, some newer techniques that may become standard methods in research or diagnostic pathology have been included. New sections deal with artifacts and troubleshooting, methods for microorganisms and fungi in sections, and techniques for detecting calcium oxalate deposits and for staining bone and cartilage in transparent



whole-mount preparation — an important procedure in testing for the teratogenic effects of drugs and other substances. As methods of fixing and processing tissues have become more diverse, the first four chapters describe various newer reagents and techniques. The subsequent chapters deal with ‘classical’ historical staining with dyes and often provide revised explanations of the rationale behind their use. The chapter on nucleic acids now includes an expanded description of hybridization histochemistry and methods for detecting apoptotic cells. The concise but thorough description of immunohistochemical techniques provides a satisfactory introduction to methods widely used in many fields of biological research and diagnostic histopathology. The space for the new material in this edition has been obtained

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by removing the descriptions of old methods that are now rarely used. The extensive bibliography encompasses over 1400 references, many of them published after 2000, and a glossary and index have also been included.

In summary, for the fourth decade, *Histological and Histochemical Methods 5e* continues to be an essential comprehensive resource for students, lecturers, researchers, and professionals using histological and histochemical techniques.