1. Record Nr. UNINA9910637710403321

Autore	Dey Pranab
Titolo	Basic and Advanced Laboratory Techniques in Histopathology and Cytology / / by Pranab Dey
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2022
ISBN	9789811966163 9789811966156
Edizione	[Second edition]
Descrizione fisica	1 online resource (350 pages)
Disciplina	571.6028
Soggetti	Pathology Histopatologia Tècniques citològiques Tècniques histològiques Llibres electrònics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Chapter 1: Fixation of histology samples: Principles, methods and types of fixatives -- Chapter 2: Processing of tissue in the histopathology laboratory -- Chapter 3: Embedding of tissue in histopathology -- Chapter 4: Decalcification of bony and hard tissue for histopathology processing -- Chapter 5: Tissue Microtomy: principle and procedure -- Chapter 6: Frozen section: Principle and procedure -- Chapter 7: Staining principle and general procedure of staining of the tissue -- Chapter 8: Haematoxylin and Eosin stain of the tissue section -- Chapter 9: Special Stains for the carbohydrate, protein, lipid, nucleic acid and pigments -- Chapter 10: Connective tissue stain: Principle and procedure -- Chapter 11: Amyloid staining -- Chapter 12: Stains for the Microbial Organisms -- Chapter 13: Cytology sample procurement, fixation and processing -- Chapter 14: Routine staining in cytology laboratory -- Chapter 15: The basic technique of fine needle aspiration cytology -- Chapter 16: Immunocytochemistry in histology and cytology -- Chapter 17: Flow cytometry: Basic principles, procedure and applications in pathology -- Chapter 18: Digital pathology -- Chapter 19: Automation in the laboratory and Liquid-based cytology --

Chapter 20: Polymerase chain reaction: Principle, technique and applications in pathology -- Chapter 21: Fluorescent in situ hybridisation techniques in pathology: Principle, technique and applications -- Chapter 22: Tissue microarray in pathology: Principal, technique and applications -- Chapter 23: Sanger sequencing and next-generation gene sequencing: Basic principles and applications in pathology -- Chapter 24: Liquid biopsy: Basic principles, techniques and applications -- Chapter 25: Artificial neural network in Pathology: Basic principles and applications -- Chapter 26: Compound Light microscope and other different microscopes -- Chapter 27: Fluorescence microscope, confocal microscope and other advanced microscopes: Basic principles and applications in pathology -- Chapter 28: Electron microscopy: Principle, components, optics and specimen processing -- Chapter 29: Quality control and laboratory organization -- Chapter 30: Laboratory safety and laboratory waste disposal -- Multiple choice questions for the self-assessment.

Sommario/riassunto

The second edition of this well-received book provides detailed information on the basic and advanced laboratory techniques in histopathology and cytology. It offers clear guidance on the principles and techniques of routine and special laboratory techniques. It also covers advanced laboratory techniques such as immunocytochemistry, flow cytometry, liquid-based cytology, polymerase chain reactions, tissue microarray, molecular technology, etc. The book's second edition covers several important recent topics with many new chapters, such as liquid biopsy, artificial neural network, digital pathology, and next-generation sequencing. Each chapter elucidates basic principle, practical methods, troubleshooting, and clinical applications of the technique. It includes multiple colored line drawings, microphotographs, and tables to illustrate each technique. The book is a helpful guide to the post-graduate students and fellows in pathology, practicing pathologists, as well as laboratory technicians, and research students.