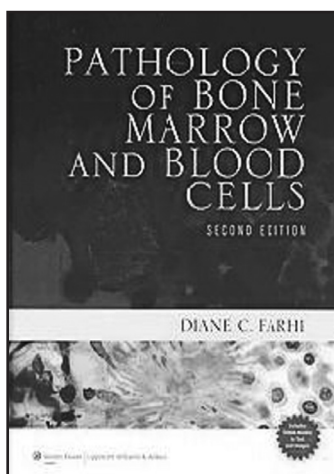


and foods containing fiber are described, such as: intestinal health; cardiovascular health; weight control; satiety; control of glycemic response and prebiotic effects. The content of this book is extremely important in the context of tackling problems related to deficient intake of dietary fiber by the population (the case for Brazil, particularly in urban centers). This information can be used by the food industry to introduce these ingredients into foods, and also by the consumer, by clarifying possible benefits of these ingredients and dietary fiber. The book serves as a reference for students and professionals in the areas of food, nutrition and labeling, as well as in product development.

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HEMATHOLOGY

FARHI, D.C. *Pathology of bone marrow and blood cells*. 2.ed. Baltimore: Wolters Kluwer, 2009. 422 p.



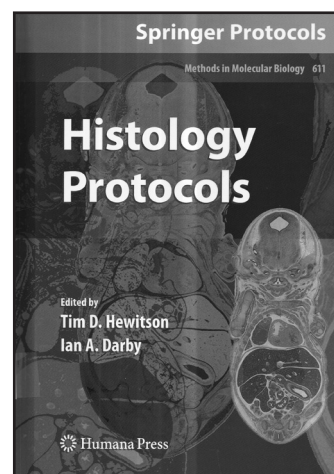
This work, published in its second edition in 2009, presents a concise text covering the current aspects of pathogenesis of hematological disorders. The illustrations, all photomicrographs, are excellent quality and representative of Hematologic frames discussed in the text. The book is divided into four parts, dealing with the main pathologies affecting the hematopoietic system in 28 chapters (304 pages). In the first section, the authors provide a brief review of hematopoiesis, addressing the structure of bone marrow, growth factors and cytokines that regulate the system as well as the extramedullary hematopoiesis sites after birth (liver and spleen). Also

in this introductory part, the authors discuss techniques for collecting bone marrow as well as the descriptive aspects of the analysis. The next part briefly covers the constitutional system of hematopoietic pathologies ranging from thalassemia and hemoglobinopathies including rarer syndromes such as Fanconi anemia and dyskeratosis congenita. The reactionary non-malignant pathologies such as nutritional anemia, inflammatory, allergic and infectious diseases are covered in 16 chapters in part three. Finally, in part four, the clonal nature of diseases is discussed, namely hematopoietic neoplasias. In 12 chapters, the risk factors for the development of onco-hematology, leukemia, acute or chronic, lymphoma (Hodgkin's and non-Hodgkin's), neoplasms of plasma cells, T cells, B cells and natural killer cells, histiocytosis neoplasms and myelodysplastic syndromes are addressed. As an appendix, the text presents the latest classification of the World Health Organization (2008) for hematopoietic tumors and lymphoid tissues. As outlined, the text is concise and precise in the information provided, constituting an important volume for use at undergraduate level and by those requiring a rapid update.

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HISTOLOGY

HEWITSON, T.D.; DARBY, I.A. *Histology protocols*. New York: Humana Press, 2010. 229 p.



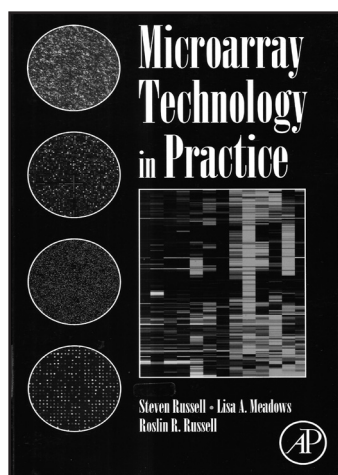
The book *Histology Protocols*, edited by Tim D. Hewitson and Ian A. Darby (Humana Press, 225 pages) reports the basic techniques of immunohistochemistry and molecular biology used to optimize resources and obtain accurate results. The book is divided into three parts. In the first part, the authors explain in three chapters how to prepare tissue, perform fixation, embedding and sample processing (Chapter 1) for the main techniques used for extracting RNA from histological samples (Chapters 2 and 3). The main histological staining techniques are covered in the second part of the book. Techniques for

identification including immune (Chapters 4-7), lectin (Chapter 8), hybridization (Chapter 9), histochemical staining and microscopy (Chapters 10 and 11), and specific methods for identification of hypoxia in situ (Chapter 12) and apoptosis (Chapter 13), are described. In the third part, the authors conclude the book with advanced imaging techniques (Chapters 14-16) and image analysis (Chapter 17). This book is recommended to students and researchers using the laboratory techniques on histology described. Updated protocols are described by renowned scientists in the area using understandable language while details of possible interference are given for each technique. Tim D. Hewiston and Ian A. Darby have undertaken several studies on histology, many of which were conducted in collaboration with the authors contributing to this book.

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MOLECULAR BIOLOGY

RUSSEL, S.; MEADOWS, L. A.; RUSSEL, R.R.
Microarray technology in practice. London: Academic Press, 2009. 449 p.



Steven Russel, Lisa A. Meadows and Roslin R. Russell. Chapters 1 to 5 outline the principles of the methodology, a brief background, and the experimental bases for carrying out experimental design for measurements

on nucleic acid and protein microarrays. From chapter 3, the selection of probes and obtention of cDNA and amplicons are addressed as well as the preparation of the arrays. Chapter 4 highlights the importance of obtaining samples, extraction of nucleic acids, especially RNA, production of cDNA, and the staining methods, as well as RNA amplification. The chapter includes a critical assessment of a range of methods, with emphasis on quality control focusing on fluorescence staining. In Chapter 5, hybridization procedures are described, followed by bioinformatics procedures for system data acquisition, methods of comparison and data obtention. The importance of quality control in these procedures is emphasized as are basic precautions for performing analysis. Chapter 6 introduces the applied bioinformatics procedures characterizing the treatment of data obtained, and the application of selection concepts using filters which normalizing data based on internal quality controls. Concepts of normalization, consortium systems of internal and external quality control of microarrays, data reprocessing, system noise correction and final normalization for application of statistical methods. Chapters 7 and 8 outline concepts of general and applied statistical methods for both parametric and non-parametric microarray data. Classification by gene groups, introduces the concept of supervised method quality, and quality control of the data analyzed. Chapter 9 provides details on databases at various sites. Chapter 10 describes the application of microarrays in genomic analysis whereas Chapter 11 addresses the application of microarrays in medical sciences such as: investigation of pathogens, profile of nucleic acids in human metabolic diseases, study of single-base polymorphism, and its relationship with diseases. Chapter 12 provides a succinct description of other applications of abundant protein binding arrays, and protein microarray technology. Finally, Chapter 13 contains suggestions on new perspectives of microarrays besides their technical evolution and analysis. This book represents an important source for updating knowledge on high-performance technologies, and is applicable to research and translational medicine.

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