### Essential Haematology

A. V. Hoffbrand, P. A. H. Moss, J. E. Pettit. Oxford: Blackwell (5th edn), 2006: 380pp. ISBN 1 40513649 9. £25.99.

This book lives up to its name in being an 'essential' for postgraduate and final-year medical/biomedical students and practitioners. The 5th edition is welcome in providing up-to-date material within the rapidly changing context of haematology.

Twenty-four chapters have increased to 28, reflecting additional content that includes a chapter devoted to the anatomy, functions and abnormalities of the spleen.

The section on 'Chronic myeloid leukaemia and myelodysplasia' has been split into two chapters, as has 'Malignant lymphomas', which has become separate items on 'Hodgkin's lymphoma' and 'non-Hodgkin's lymphoma'. The genetics of haematological malignancies has been extended to include current aetiological findings.

A considerably extended input on blood transfusion is welcomed, in particular the updated and considerably lengthened reference section. Finally, the chapter on 'Pregnancy and paediatric haematology' has been refined to focus specifically on neonatal haematology. Most of the other chapters have been revised significantly and include the 'Introduction of new diagnostic laboratory tests' and 'Imaging techniques for the diagnosis of malignant blood disorders', while the content devoted to iron and its role has also been updated, reflecting the expansion of research and knowledge in this area.

The greatest feature of this book lies in the number and quality of colour plates and diagrams included, which clearly illustrate and explain a variety of complex concepts, data or information, all supported by detailed legends. The textual layout has retained the clear definitions of headings and subheadings, and all chapters end with a more extensive list of references, which make an excellent source of further reading.

Appendix 1 has kept up with the increasing numbers of cluster differentiation molecules identified, and of their roles. The glossary of terms for molecular genetics is no longer offered; however, these terms are more appropriately explained within the text, as and when required.

Finally, I now understand the significance of the blue lines which run vertically down the sides of selected paragraphs, whereby the authors seek to assist the learning of postgraduate and medical students – but haematology is too fascinating and enticing a subject to omit the reading of any sections of this excellent and highly recommended textbook. Joyce Overfield

## Bone Marrow Diagnosis: An Illustrated Guide

D. Brown, K. Gatter, Y. Natkunam, R. Warnke. Oxford: Blackwell (2nd edn), 2006: 216pp. ISBN 1 4051 3561 1. £95.

This second edition retains its original philosophy but incorporates the most recent advances in microscopy, digital morphology and data capture, alongside those improvements in staining techniques and immunocytochemistry. With each diagnostic heading there is core information relating to the descriptive features, current classification, common features associated with bone marrow pathology, and, crucially, possible conflicting images, diagnosis and pitfalls.

The colour images of the standard histological stains (haematoxylin and eosin [H&E], Giemsa) and immunocytochemistry are consistently clear, high-quality photographs of trephine biopsies. This provides the reader with a quick reference guide, together with the added facility of being able to look at a direct comparison between the microscopic image and that of the illustrated photomicrographs.

The authors have deemed that the guide should aim to be a companion book for pathologist, trainee histopathologists and biomedical scientists. New subject headings have been added, which, along with the revised material on classifications of lymphoma and leukaemia, allows the reader to view a series of high-quality images along with descriptive diagnostic text pointing to a possible reference diagnosis. For a more comprehensive description of the diagnostic features, World Health Organization (WHO) classification details, prognostic values and a different array of images, the book quite rightly refers the reader to the heavier tomes on the market.

The quality of the images and the structure and concise nature of the text result in a book that fits exactly with the authors' original aims. It will quickly become an essential guide to bone marrow diagnosis.

#### S. J. Webb

### Diagnostic Bacteriology Protocols

L. O'Connor (ed). Totowa, NJ: Humana Press (2nd edn), 2006: 225pp. ISBN 1 588 29 594. \$89.50.

Diagnostic Bacteriology Protocols forms part of the Methods in Molecular Biology series edited by Professor John Walker. In this second edition, the aim is to "provide ideas and aid in decision-making for those intending to introduce novel identification, detection or typing technologies into their laboratories". The field of molecular bacterial diagnostics is a fast-changing area, and it can be difficult to keep abreast of the range and combination of techniques available. The challenge of this book for me would be to provide a clear rationale for the choice of method, and then very clear instructions, should I have the opportunity to put theory into practice.

The first chapter provides a clear introduction to the subject area, giving a comprehensive explanation of the methods available. One of the strengths of the book is the range of international contributors, all working at the forefront of diagnostic techniques in their specialist fields. They bring together expertise from all the principal areas of microbiology research: clinical, veterinary, commercial diagnostic developments, environmental, food, hygiene and aquatic ecology.

Each chapter commences with a summary, followed by an introduction and then clear, detailed methods and materials. The protocols are written in an easy-to-follow, step-wise manner with helpful additional notes. Each technique described is supported by extensive reference material. At first, I wondered whether or not the lack of colour in the book would detract from its content, but this is certainly not the case. The diagrams and photographs all serve to enhance the text and the reader's understanding of the assay described.

After reading several chapters, I felt that the content lived up to my challenge and that I could follow the protocols provided reasonably confidently. I also appreciated how conventional microbiological techniques may be combined with one or more molecular steps in order to identify low numbers of pathogens in a variety of specimens. A good example of this may be found in the method described for detecting the verotoxin genes of *Escherichia coli* 0157:H7 in minced beef. Enrichment in selective broth for 18 hours is followed by immunomagnetic separation, DNA extraction from the beads, and identification of the toxin genes by a real-time polymerase chain reaction (PCR) method.

After reading the book, I feel that the aims described in the preface have been achieved. I would recommend it to anyone thinking of introducing a new technique in their laboratory, whether in a research or a routine setting. Applications of the techniques described here are wide-ranging and comprehensive, and as such makes this a good reference book to have on any laboratory bookshelf.

**Myra Wilkinson** 

# The H Factor

P. Holford, J. Braly. Piatkus Books, 2006: 281pp. ISBN 0 7499 2419 5. £9.99.

Homocysteine is now recognised as an important risk factor for several common medical conditions, and, in particular, it can increase the risk of coronary heart disease significantly. Thus, this book is invaluable as it is directed at the public to explain in simple terms how homocysteine plays a crucial role in managing good health. Its stark message is that homocysteine is now superseding cholesterol as the best predictor of heart attack, so it needs to be monitored and controlled regularly, systematically and efficiently.

The book is divided into several parts, is very easy to understand, and contains case studies and statistics. Part 1 deals with the history of homocysteine, and relevany facts and figures, pointing out that control of homocysteine can reduce the risk of heart attack by 80%, stroke by 82% and cancer by 33%.

Part 2 is the hub of this simple but very effective book, as it discusses the implications of the various homocysteine levels. This reviewer found the worldwide statistics on pages 49 and 50 fascinating. Although the book is written for public consumption, facts are backed up by references, and the authors cite more than 10 references from leading journals to summarise homocysteine levels in populations around the world, and levels can vary considerably. The last two sections of this part of the book develop a homocysteine scale (from the sick to the super-healthy) and introduce a self-test.

Part 3 is divided into 12 sections and discusses 50 diseases linked to homocysteine. In addition to heart disease, stroke and cancer, the link between homocysteine and diabetes, Alzheimer's disease, thyroid problems and even depression is discussed. This part gives the reader the impression that much more research is needed to confirm possible connections with disease. Part 4 examines the relationship between diet and homocysteine.

This book also contains two very useful appendices. The first is a flow diagram demonstrating the biochemistry of homocysteine. The second lists over 100 medical conditions associated with high homocysteine levels. The references, recommended reading, available resources for dealing with homocysteine-related problems, a directory of companies that deal with homocysteine-controlling supplements and the index cover over 40 pages. All in all, the book is very good value for money as it brings science and medicine to the public attention in a very effective way.

Saroja P. Edirisinghe