patients without tuberculosis may also be substantial if the need for treatment trials is reduced.

The second issue is the potential of PCR to facilitate efficient laboratory practice. Since our description of the application of PCR to the identification of *M tuberculosis* in positive Bactec phials, others have developed methods with broader application. Telenti *et al* identified a large number of species of mycobacteria by restriction digestion analysis of a 439 base pair fragment amplified from the gene for the 65 kilodalton heat shock protein.[1] Similarly, Vaneechoutte *et al* have described the identification of mycobacterial isolates by restriction digestion of the amplified 16SrRNA gene and confirmed our observation that PCR can be achieved following simple heating and boiling in distilled water.[2]

Standard methods of speciation are not only slow but technically demanding and time consuming. They also require repeated manipulation of viable dangerous pathogens. The use of DNA probes requires a different probe for each species. For these reasons we believe that PCR based methods for speciation of cultured mycobacteria are likely to facilitate laboratory practice, although the impact on clinical practice may be modest.

1 Telenti A, Marchesi F, Balz M, Bally F, Bottger E, Bodmer T. Rapid identification of mycobacteria to the species level by polymerase chain reaction and restriction enzyme analysis. *J Clin Microbiol* 1993;31:175–8.
2 Vaneechoutte M, De Beenhouwer H, Claeys G, *et al*. Identification of Mycobacterium species by using amplified Ribosomal DNA restriction analysis. *J Clin Microbiol* 1993;31:2061–5.

Book reviews

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The Human Yolk Sac and Yolk Sac Tumors. Ed FF Nogales. (Pp 367; DM 460.00.) Springer. 1993. ISBN 3-540-56031-9.

To the uninitiated, a whole book on the human yolk sac might qualify in a competition for "crawling along the frontiers of knowledge with a hand lens". Yet this view would ignore much of the biological and clinical fascination of this otherwise transient organ. It is, for example, the initial repository of the primordial germ cells in the embryo, prior to their migration to the site of the gonads.

Professor Nogales should be congratulated on bringing together a group of authors to produce what must undoubtedly be the definitive work on this topic. The book begins with encyclopaedic reviews by King and Enders on the development of the yolk sac in the human and other mammals. There follow chapters on the major proposed functions—haemopoiesis, synthesis of proteins (especially α fetoprotein (AFP)), and nutrition of the embryo (primitive placenta). Other chapters deal with yolk sac abnormalities and their identification by ultrasound scanning, the possible role of this organ and the origin of congenital abnormalities, and early pregnancy wastage. The concluding chapters cover in great detail the clinical features of "yolk sac carcinomas" in the ovary, testis, and other sites. This tumour is so named, not because it arises from the yolk sac, which disappears in early embryonic life and would certainly not reside in the gonads, but because of similarities in histological structure between these tumours and the extraembryonic membranes. In fact, the range of structures and sites of these tumours is highly confusing. The only feature which all these have in common is the secretion of AFP, and the non-expert might be even better served by the term "AFP-oma".

In summary, this book represents a unique and complete source of references on this topic. It should probably be on the personal bookshelf of all histopathologists involved in the diagnosis of gonadal tumours, and available to many others who specialise in research into the biology and disorders of early human pregnancy.

T CHARD

Viral Infections of the Heart. Ed JE Banatvala. (Pp 257; £50.00.) Hodder and Stoughton. 1993. ISBN 0-340-55730-0.

The multidisciplinary nature of this book, with contributions by researchers and practitioners in the fields of virology, immunology, epidemiology, pathology, and clinical medicine, provides the reader with an up to date and comprehensive guide to viral infections of the heart.

The initial chapters describe the viruses associated with cardiac disease, their epidemiology, pathogenicity, and clinical spectrum. The laboratory diagnosis, both histopathological and virological, is discussed in later chapters, as well as the treatment and prevention of virus induced heart disease.

The editor concentrates, quite rightly, on the role of enteroviruses and in particular the coxsackie B viruses in acute myocarditis. Nevertheless, space is made available for the discussion of experimental evidence and clinical observations implicating a wide range of viruses, either as the cause of heart disease, or as a contributory factor. In particular, chapter 7 discusses the role of HIV in heart disease. As fewer patients succumb to opportunistic infections through the use of new antimicrobial agents and improved treatment regimens, the reported incidence of heart muscle disease associated with HIV infection has risen. Chapter 8 explores the evidence, obtained mainly via molecular biological techniques, that cytomegalovirus has a role in atherosclerosis. The final chapter, which is concerned with infections with viruses and *Toxoplasma gondii* in heart transplant recipients, describes the incidence of infection, evidence for involvement of the heart, and treatment and prophylaxis.

This well presented book sheds light on what has been a difficult and sometimes contentious area of research. The rapid progress now being made through the use of molecular biological techniques is amply illustrated throughout. This book should be read, not only by virologists, but by all those whose research or clinical practice impinges on the aetiology, diagnosis, and treatment of cardiac disease.

JJ GRAY

The Hospital Autopsy. DWK Cotton, SS Cross. (Pp 178; £45.) Butterworth Heinemann. 1993. ISBN 0-7506-1435-8.

This is a short, down to earth, practical guide to hospital necropsies which should be of value to pathologists, trainees, and mortuary technicians. Most sections are less than 10 pages long and they concentrate on common problems, or give clear advice on how to tackle less common situations, such as maternal necropsies. The largest section covers the routine hospital necropsy and this is supported by good black and white photographs. It is followed by a chapter on special procedures which covers a wide range of topics such as demonstrating air emboli, examining the heart's conduction system, necropsy assessment of osteoporosis, and macroscopical dye techniques. There are specific chapters on the examination of the nervous system, fetal and perinatal necropsies, and the maternal necropsy.

Although the authors have done well to keep this book so concise, I would have liked to see some tables of normal values. These would have been particularly useful in the fetal and perinatal section.

The chapter on biological safety concentrates on common microbiological hazards and gives clear information, not only on how to minimise the risks, but also the relevant regulations covering this topic (a useful resource for anyone writing their accreditation documents).

Finally, there is a chapter on clinical audit and auditing the necropsy. This should be read by all members of hospital audit committees and by all pathologists. After reading this book, we may be able to perform technically superb necropsies, but if we cannot convey the findings to the clinicians in a clear and timely manner, necropsy skills will become a dying art.

SA DILLY

Cell Proliferation in Lymphomas. Ed J CROCKER. (Pp 192; £59.50). Blackwell Scientific Publications. 1993. ISBN 0-632-022925.

This was an unusual book to review in that there was much of interest in it. But it required a lot of effort to read: it is a curious mixture of chapters. Some have information about proliferation and nothing