The most important advance in oncology ever is the understanding that cancers (mostly) have specific causes, and that these causes may be identified, leading (potentially) to control. The causes of some cancers are infectious agents. The proposal that cancers are caused by infectious agents has had a very up and down history: today we can be certain that many cancers, including several of the very common ones, have actiologies with infectious agents as necessary (but usually not sufficient) factors. Where a cancer has an infectious “cause” we can in principle design control strategies based on ones for infectious diseases—we know how to cope with infectious diseases (mostly).

Looking world wide we can now point at the main infectious agents involved in cancer. These are human papillomavirus (HPV), which is recognised by the World Health Organisation as a cause (and probably the primary cause) of cervical carcinoma; hepatitis B and C viruses (HBV and HCV), which certainly contribute to hepatocellular carcinoma; and Helicobacter pylori, which most certainly contributes to gastric carcinoma. These four examples probably account for a fifth or more of cancer globally. In the developed world, the proportion is rather less because the hepatitis viruses are rare. In certain areas of the world, other infectious agents are major contributors to cancer causation—for example, in Egypt, Shistosoma haematobium and bladder cancer, and in parts of the Far East, Epstein-Barr virus (EBV) and nasopharyngeal carcinoma. Perhaps dozens of other cancers, some wonderfully rare and exotic, are associated with some sort of infection.

This present book deals with the issue of infection and cancer. It is laid out in sections according to the different class of infectious agent, with a chapter giving an overview of the biology (including molecular aspects) of the different agents (such as herpes viruses) followed by individual chapters describing the involvement of these agents with specific cancers. There is also a fascinating introductory chapter dealing with the historical aspects of the topic, reminding us of the often bizarre ideas our ancestors had about the biology of disease.

This is a multiauthored book with the accompanying strengths and faults. The strengths are of course that the chapters are written by experts and are authoritative. The weaknesses are that the chapters are perhaps not so well integrated as they might be. My experience of editing is that it is not easy to get contributors do what you want. It is a tough editor who strikes out parts of a chapter, or worse, asks for more material or a different slant, or worst of all, says that such and such is already covered (better, at least by implication) in another chapter. The editor, if he were to do this, would end up with no chapters.

Therefore, there is inevitably some degree of overlap, particularly in the description of the biology of infectious agents as relevant to cancer. There are other problems, particularly with the balance of the topics covered.

I feel quite strongly that the coverage should have been weighted towards the cancers that really are quantitatively important, leaving “less important” cancers to a short summary chapter. As I indicate above, perhaps three cancers with infectious actiology contribute to a fifth of the world burden. These should have been starred for really in depth coverage. But—for example, leiomysarcoma and leiomyosarcoma get 15 pages and adult T cell leukaemia gets 19 pages, whereas hepatocellular carcinoma weighs in at 17. Surely this isn’t quite right.

Likewise, one topic that I think might have been dealt with more effectively (in the space generated by reducing the treatment of the more exotic diseases) is how the different agents discussed manage to evade the immune system and so set up the chronic infection. This surely is the necessary prodrome for cancer—which after all is not an acute disease. Why does the immune system not do its job, for example? Vaccination is another intervention route—the practicalities of vaccinating against HBV in the case of HBV—for example. Vaccination is another intervention route—the effective elimination of HBV in Taiwanese children is expected to reduce hugely the incidence of hepatocellular carcinoma. Eradication of the infection is a third route—for example, H pylori. What are the prospects, say, for an HCV vaccine? And what are the practicalities of vaccinating against HBV in the third world?

Perhaps I have sketched out a different perspective. In conclusion, there is something for everyone here who is interested in the enigmatic world of malignant melanoma.

A Morris

Methods in Molecular Medicine: Melanoma Techniques and Protocols
Nickoloff BJ, ed. ($125.00.) Humana Press, 2001. ISBN 0 896 03684 7

This is number 61 in a series of books on molecular medicine published by Humana Press. It is very comprehensive in its scope and has 20 chapters written by different authors starting with general aspects of melanoma molecular biology, ranging through tumour suppressor genes, tumour specific antigens, and genetic testing, going on to diagnostic aspects, treatment, and monitoring of residual disease. Each chapter has a standardised layout, each topic covers general principles as well as those more specific to malignant melanoma, and there are step by step details of methods and comprehensive references. Chapters vary in length but are of a uniform high standard and all are clear even to a non-expert. In many cases, the chapters will be of interest to workers in fields other than melanoma because they have some general applicability.

Workers in the field may be well versed in one aspect of this disease and for them this book will put other areas of research into perspective. In conclusion, there is something for everyone here who is interested in the enigmatic world of malignant melanoma.
action for the different formulations also thoroughly scrutinised. However, little, if any, mention is made of recent advances in the delivery of naked DNA and the use of electroporation and ultrasound in directing DNA delivery.

Part 5 reviews the pharmacokinetics of macromolecules and gene delivery systems. This is a key issue for all gene delivery constructs because it is essential that the agent is retained systemically for a long enough time for it to reach its site of action. This is an area that has seen important advances in recent years yet is only reviewed briefly here. However, the interested reader is again guided to a wealth of further reading that provides additional insights.

Subsection 6 gives an extensive summary of the use of ligands and peptides to promote cell entry of complexes, with particular emphasis on (receptor) binding ligands and agents that promote the release of DNA either by endosome membrane disruption or vector unpackaging. This is followed by a brief subsection outlining some novel construct formulations encompassing semisynthetic vectors (combining viral proteins with non-viral vectors) and systems for sustained release of gene delivery systems.

The book concludes with an appraisal of the non-viral gene delivery vectors in trials, evaluating their use in the treatment of the monogenetic disorder, cystic fibrosis, and moving on to their potential in cancer treatment. Although this section is somewhat out of date (given the ever increasing number of trials in progress), it still provides the reader with an invaluable insight into the progression of non-viral gene delivery vectors from the laboratory into the clinic.

On the whole, this book provides an exceptional insight into its subject area, and offers good value for money. I would certainly recommend this book to those with an interest in this field of study.

A Parker

Figure 11 Mutations as a result of CG transitions at the codons encoding the activation cleavage site arginine residues of (A) factor VIII and (B) factor IX.