

Book reviews

Cytotoxic Drug Resistance Mechanisms. Brown R, Boger-Brown U, eds. (\$89.00.) Humana Press, 1999. ISBN 0 896 036030 0.

Cancer chemotherapy is not working, or at least it is not working as well as one would like. More often than not, intrinsic or acquired resistance of tumour cells to cytotoxic drugs renders such treatment ineffective. This book aims to equip those involved in basic and "translational" research with a repertoire of experimental approaches to this problem of anticancer drug resistance. The extent of the problem and the practical difficulties associated with using patients who have cancer as an "experimental system" are set out in an excellent opening chapter by Alan Anthony and Stanley Kaye. This clinical perspective seemed fairly familiar, however, and I was more attracted by the remainder of the book, which is essentially a collection of laboratory protocols. These cover a wide range of techniques applicable to the usual molecular suspects, including P-glycoprotein and related drug transporters, p53, the Bcl-2 family, and glutathione conjugation. As the introductory chapter points out, it is often difficult to attribute clinical observations of drug resistance to any one of these high profile mechanisms. This could result from, in part at least, the small size of many of the relevant clinical studies, but it seems likely that additional molecular mechanisms of equal or greater importance remain to be identified. With this in mind, two chapters deal with *in situ* hybridisation, one technique that might help identify novel resistance mechanisms, where resistance is associated with genomic rearrangement. A panel of authors biased towards the USA (rather than the UK) would surely have contributed further chapters on the "information intensive" methods for the identification of novel resistance mechanisms favoured by the National Cancer Institute. Perhaps such chapters will be included in a revised edition, assuming that resistance to anticancer drugs will be providing a challenge to researchers for some years to come.

The protocols themselves are set out in self contained chapters that span the broad range of personal styles inevitable in any multi-author volume. Refreshing honesty (or is it dry wit?) shines through here and there. Those thinking of setting up fluorescence *in situ* hybridisation (FISH) are advised to "visit a lab where the technique is done routinely". No need to buy the book then—simply locate

your local medical genetics unit (practical help is on hand here again—"such units are usually attached to hospitals and universities"). In the main, however, the protocols are easy to follow and highly detailed. Very precise sets of instructions (in the case of denaturing polyacrylamide gel electrophoresis, two different sets in two chapters) are frequently presented that, in many cases, would need to be adapted to suit the routine practices of the reader. For example, because laboratories increasingly have access to fluorescence based automated DNA sequencers, it seems unlikely that the radioactive labelling of PCR products (as recommended here for the analysis of microsatellite instability) will be an attractive option for many. Similarly, a chapter on measuring DNA-drug adducts in single cells is dominated by a painstaking (and to the uninitiated, incomprehensible) description of the operation of the particular image analysis software in use in the author's laboratory. This will be of little additional value to those already using this software (for whom the manual supplied with the software might be more appropriate) and of no value whatever to those using any of the numerous alternative software packages.

But it would be churlish to dwell on these shortcomings, which if nothing else (along with some poor quality figures and a wanton disregard for proof reading) add a certain parochial charm. Like many investigators, ranging from those interested in the basic biology of cancer cells to those assessing responses to treatment at the cellular level in clinical material, I will find many of the protocols of lasting value. If only they were published in a more easily updatable and expendable format!

CHRIS NORBURY

Manual of Diagnostic Antibodies for Immunohistology. Leong AS-Y, Cooper K, Joel F, Leong W-M. (£45.00.) Oxford University Press, 1999. ISBN 1 900151 31 6. With the ever increasing workload in pathology and the academic and administrative bench tops, my room has become like Steptoe's backyard: strewn with brand new items such as glossy copies of pathology journals, ACP and RCPATH news bulletins, commercial catalogues, theses and books to review. In addition, there are the usual painful "piles" of all and sundry correspondence, waiting to receive my immediate attention. Among this paraphernalia has lain the nicely bound copy of the book by Leong *et al* also waiting earnestly for its turn. Unfortunately, despite numerous conscience pricking personal reminders including "to-ings" and "fro-ings" of the book in my brief case from work to home I somehow consistently failed to find distraction free time to read it and

prepare this review, which has been long overdue. Having received my first polite reminder from the Editorial Assistant, and before I was to receive the third reminder, I felt I had to promise myself to write up the review within the next 48 hours.

Thankfully, I somehow managed to pluck up enough focused energy, in the middle of a busy morning, to pick up the book and start reading it. My initial aim was simply to read the preface and the cover notes and come back to do more determined reading and analysis. Remarkably, instead, I found myself almost uncontrollably reading page after page of the main text. Before I knew it, I had spent more than an hour and covered more than one third of the book without feeling at all strained or satiated. It was almost as if I had been enjoying a magnificent Chinese meal and my mouth was still watery to attack the left overs.

In retrospect, my immense attraction and appetite for the book arose principally from the following three features: (1) It represents a quick reference guide to understanding the scientific and methodological backgrounds to virtually the full spectrum of monoclonal antibodies in present use in diagnostic immunocytochemistry. (2) It gives a concise and yet fairly incisive and accurate appraisal of the diagnostic value and limitations of each anybody marker listed. (3) The accounts are written in a systematic and easy to read style, backed up by pertinent core references.

The book also contains a set of tables in the Appendix, which provides a helpful series of diagnostic algorithms for handling commonly encountered differential diagnostic problems.

Professors Leong *et al* have compiled an enviably useful compendium of immunocytochemical data, which some of my colleagues and I have long thought of publishing ourselves. The book is also a long awaited follow up to a similar type of book produced nearly a decade ago by Mark Wick and Gene Siegal, which I also had the immense pleasure and privilege of reviewing.

Reading through the accounts of 170 or so listed markers, of which over 100 are in routine use in our regional unit in Wales, has been highly educational in the true spirit of our college's CPD programme. The appraisals of markers such as OR and MyoD1 are excellent in explaining the subtleties of their diagnostic utility, whereas the write ups on metallothionein and SV40 antibodies give informative insights into these new markers, and those on CD56 and CD43 are similarly illuminating. Overall, the book should serve extremely well as a quick reference guide for many keen and aspiring medical laboratory scientists, as well as trainee and consultant histopathologists.

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