metastasis. If metastasis has not occurred when the tumour is diagnosed, excision will cure; if it has, the concern is the treatment of disseminated disease. The clinical problem is not so much how, as when and whether.

This report of the CIBA Foundation Symposium on metastasis has 210 pages of mostly excellent and interesting reports of the biology of metastasis, and then in the discussion of the only clinical paper, on p. 235, the participants agree that 'what we lack ... is communication between basic researchers and clinicians ...'. Those who work in the world of metastasis research, or who aspire to, should find this book a useful and stimulating survey of current research in the biology of metastasis, from the extracellular matrix to the cell surface to the molecular genetics of the metastatic phenotype. For those who are not in this world, and especially for those whose concern is the prevention of deaths from cancer, I fear that reading this book may induce a feeling that the research and practical issues are not connected.

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Everyone's guide to *Chlamydomonas*

The *Chlamydomonas* Sourcebook. A Comprehensive Guide to Biology and Laboratory Use

by Elizabeth H. Harris, Academic Press, 1989.
£90.00, $145.00 (xiv + 780 pages)
ISBN 0 12 326880 X

This is a magnificent book. 'Sourcebook' connotes a dreary compilation of formulae, tables and endless references. At best one might hope for an accurate index, a quick consultation of the appropriate page for necessary information, and then back onto the shelf. Not so this volume. Its contents cover all these expectations, and much much more.

The Chlamydomonas Sourcebook is a summary review and sourcebook for all the many fields of basic biology to which *Chlamydomonas* research has made contributions. It includes the expected, such as maps of chromosomal and organelle DNAs and a list and brief description of available mutant clones; and the less expected – information on species other than *C. reinhardtii*, and review of and background to all the major research fields.

Throughout, the remarkably readable style is spiced with comments on the significance to related work on other organisms, asides on the quirks and pitfalls of *Chlamydomonas*, and valuable analyses of situations where data conflict (what is the true chromosome number of *C. reinhardtii*?).

Clearly this volume is a labor of love. The author, a researcher and curator of the *Chlamydomonas* Genetics Center at Duke University, has years of experience with this unicell, which serves as a model system for so many kinds of basic research. Harris begins with a reconstruction of the circuitous genealogy of the clones now in use in various laboratories around the world. This provides not only historical background on earlier contributions but also explains the genetic variation among current strains, which appear morphologically so similar. This variation has been valuable in establishing the inheritance pattern of extranuclear genomes. The main body of the book is a serial treatment of cell structure, growth, life cycle events, motility, metabolism and genetics of *Chlamydomonas*, predominantly citing *C. reinhardtii* papers but also adding those on other *Chlamydomonas* species, and related organisms where available and appropriate. Most welcome here for the younger generation or newcomers should be the inclusion of older work, often neglected but now interpretable in modern terms. Scattered throughout these chapters are selected illustrations, tables and diagrams, plus remarkably clear précis and critiques of the state of the *Chlamydomonas* work with respect to similar work being carried out elsewhere among the five kingdoms. The final chapters gather together some of the most tested and successful laboratory techniques for *Chlamydomonas* research, and the volume concludes with a list of *Chlamydomonas* doctoral dissertations plus an extensive bibliography and index.

Chlamydomonas is among the very few eukaryote unicells that combine an unusually large number of the traits most propitious for a model research organism: easy long term storage, large population on either defined or supplemented medium, a 2–4 week life cycle, complete with tetrad analysis, a relatively tiny nuclear genome, presence of both mitochondria and plastids, and a library of characterized mutant strains. It has the flagella that yeast cells lack. Transfection by naked DNA has already been accomplished and current developments promise a transformation vector. This will complete the repertoire of techniques available to the *Chlamydomonas* worker, and armed with this sourcebook anyone can profitably delve into the genetics of his or her favorite phenomenon using *Chlamydomonas*.

Surely one can find fault? Alas, I suspect the major weakness of this book will be its binding. Read with pleasure, handle with care.

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