There follows a chapter on linkage and association studies. In linkage studies, specific locations on three chromosomes, X, 6, and 11, have been implicated by different investigators. Other groups have rejected linkage to these loci and, with the exception of the X chromosome linkage, independent replication has not been forthcoming. Association studies have also produced a number of conflicting results mainly concerning the HLA region. However, there is a fairly strong suggestion that the blood group type O is found with greater frequency among patients with mood disorders in comparison with subjects from the general population, but here also there are a number of discordant results. The authors once again appeal to the notion of genetic heterogeneity as well as methodological differences between studies to explain the discrepancies in publications on linkage and association.

A chapter on biological markers follows which reviews a number of neurobiological genetic and pharmacogenetic studies. Some interesting findings have been reported but again further work is needed to confirm them and establish their relationship to genetic variation. The final chapter summarises a series of 'empirical generalisations' and discusses their implications for future research, clinical practice, and genetic counselling.

The book contains exhaustive reviews of all the topics covered, preceded in each case by discussion of the methodological issues involved. It is best on genetic epidemiology where the authors have most expertise. It is weakest in the chapter on linkage and association studies. In particular, I feel

that the authors should have considered some of the possible factors that might contribute to false positive findings with these research methods. Their failure to do so has forced them to rely too heavily upon explanations in terms of genetic heterogeneity. Also, having repeatedly raised the issue of heterogeneity throughout this book, they do not face up to the issue of how this reduces the power of linkage studies even though there have been a number of simulation studies addressing this issue. Moreover, even if robust linkage can be shown, the presence of heterogeneity will raise a number of thorny problems when we try to move towards cloning the defective gene or genes.

In general, however, this book is well and clearly written and I can recommend it to anyone considering entering this difficult area of research as a useful introduction to the field. We are perhaps still some years away from being able to write a really definitive account of this subject.

M J OWEN

Molecular Aspects of Development and Aging of the Nervous System. *Advances in Experimental Medicine and Biology* Volume 265. Eds J M Lauder, A Privat, E Giacobini, P S Timaras, A Vernadakis. (Pp 326; \$69.50.) New York: Plenum Press. 1990.

'Molecular' is an overused word: researchers may recognise from the

title of this book that it is in fact a Conference Proceedings book. Two words in the title give this away: the bogus specificity and topicality implied by the word 'molecular' together with the vagueness conveyed by the word 'aspects'. It is in fact a ragbag collection of book chapters presented in camera ready format at a meeting, sponsored in part by the Greek Tourist Board, in 1988.

The book's 30 chapters are organised into five themes: 'Gene and phenotypic expression', 'Growth factors and oncogenes', 'Cytoskeletal, and extracellular molecules', 'Neurotransmitters and hormones', and 'Molecular aspects of aging and Alzheimer's disease'. Most chapters, while competently written, focus on the work of the authors' own laboratories without attempting to draw links between the various themes: furthermore, there is little or no overlap or cross referencing between the various chapters within each theme. Thus, the book works only on the 'lucky dip' level. I found some of the chapters on subjects outside my area of expertise interesting (for example, Rutishauser and Nybroe and Bock on cell-cell interactions in the CNS), but those on my own speciality (Alzheimer's disease research) disappointingly superficial and out of date. I suspect most potential specialist readers would find the same.

The book is poorly produced: every author uses different reference styles and type faces and, inevitably in a camera ready book, there are many typographical errors. I cannot recommend it.

JOHN HARDY