BOOK REVIEWS

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Clinical and Genetic Aspects of the X Linked Hydrocephalus/MASA Spectrum. Editor C Schrandt-Stumpel. (Pp 137.) Maastricht: Datawyse/Universitaire Pers. 1995.

This small volume is effectively a monograph recounting the progressive recognition that three disorders, X linked hydrocephalus, MASA syndrome, and X linked complicated spastic paraparesis linked to Xq28, in fact constitute a clinical spectrum. The variability in clinical features within families and the overlap between families led to the suggestion that the disorders may be allelic. The disorders all mapped to Xq28, and a search for mutations in the LICAM gene was fruitful.

Although the volume consists largely of a series of papers, there is a logic to the presentation that allows this book to rank as more than that.

I would recommend this as a fine example of a dissertation/monograph, sure to be of interest to all clinicians and scientists in genetics who recognise the value of a broad understanding of the disorders that we attempt to diagnose, manage, and study. It would also be of interest to our colleagues in paediatric neurology.

ANGUS CLARKE

From Genotype to Phenotype. Editors S E Humphries, S Malcolm. (Pp 310; £55.00.) Oxford: Bios Scientific Publishers Ltd. 1994. ISBN 1-872748-62-7.

This book is the second in the Human Molecular Genetics series, following on from the excellent "Human Mutation" volume, and is aimed at both clinical and scientific research geneticists. The first volume had a relatively easy task in explaining and illustrating the

history of genetic mutations, while this second volume takes on the more difficult job of describing the present state of knowledge regarding how a genotype is related to a specific phenotype. This could just have been an exercise in presenting lists of disorders, their mutations and a description of the correlations with phenotype known to date. This would not be a bad thing but without suitable commentary to place the conclusions in context such a book would have been of little use. Thankfully, the editors have ensured that there are several chapters that describe the types of mutation involved in genotypes, notably the first chapter by Susan Malcolm that clearly and concisely describes most of the mutations involved in human genetic disease. Chapters on cystic fibrosis, Gaucher's disease, collagen disorders, familial hypercholesterolaemia, Charcot-Marie-Tooth disease, and Wilms' tumour make up the first half of the book and cover these areas admirably. Two chapters on myotonic dystrophy and fragile X disease clearly describe the new field of short tandem repeat length variation as a cause of genetic disease. The remaining mechanisms of mutation are then covered in the next chapter, including somatic mosaicism, chimerism, and X inactivation. A chapter on mitochondrial DNA associated disease is then followed by three chapters covering the emerging challenge in the field of human genetics, namely multigenic disorders. Three subjects are covered: diabetes, coronary artery disease, and dyslipidaemia. These chapters are necessarily weaker than the preceding ones and the chapter on diabetes does not discuss non-insulin dependent diabetes which is unfortunate given the recent work by Todd *et al* in describing techniques by which loci involved in a heterogeneous genetic disorder can be investigated. Besides these minor criticisms the book is clear and well laid out, with high quality black and white illustrations and each chapter has been concisely referenced. As Professor Kåre Berg says in his introduction, "It is a pleasure to read a book that describes these recent advances so well and which is so full of novelty". This is a well written introduction to the state of the art in one of the most rapidly advancing fields in medical research. It is to be recommended to both the clinician and scientist who are taking part in the fascinating search for the elusive links between genotype and phenotype.

ANDREW J WALLEY

Haldane's *Daedalus* Revisited. Editor K R Dronamraju. (Pp 147; £19.99.) Oxford: Oxford University Press. 1995.

Haldane's reason for choosing the title *Daedalus* for his slim volume of 93 pages on

science in the future is not very clear. But Bertrand Russell's choice of *Icarus* for his counter attack, also published in 1924, is more obvious. *Daedalus* was a legendary Athenian craftsman of great skill and ingenuity. He made wings for himself and his son, Icarus, to enable them to escape the Labyrinth of Minos, but Icarus flew too near the sun and was destroyed. This mythological tale reflects Haldane's and Russell's different attitudes to science.

Haldane prophesied that science would play an increasing role in human affairs. He championed particularly the Soviet Communist attitude to science (though of course Lysenko had not yet appeared on the scene) and considered religion an irrelevance. Some of his predictions have proved correct but others were silly or wrong (windpower to replace completely more conventional energy sources and food from coal products, but he dismissed atomic power as ever having any commercial possibility). His idea of "ectogenesis", with the culture of human embryos in the laboratory, foreshadowed Aldous Huxley's *Brave New World* published in 1932.

Haldane, recognised nowadays mainly as a mathematical geneticist, belonged to a class of rebellious liberal intellectuals before the Second World War. They were often privileged and sometimes arrogant and intolerant. His book, which set out to shock the more conventional mind, was a great success at the time. I first read it as an undergraduate in the 1940s and found it very exciting but was less impressed by Russell's book. But now, on rereading these two essays, I more clearly appreciate the latter's concern. Technological developments have far outstripped even Haldane's fertile imagination and have generated many moral and ethical problems which are proving ever more difficult to resolve. It is impossible to stop scientific and technological advances. And as Russell says "Technical scientific knowledge does not make men sensible in their aims and administrators in the future will be presumably no less stupid and no less prejudiced than they are at present."

Dronamraju, a one time student of Haldane, has gathered together several eminent people to comment on *Daedalus* based on their own opinion of the work and in the light of subsequent developments. Unfortunately these contributions prove to be somewhat repetitious and even irrelevant: Perutz merely reflects briefly on Haldane in Cambridge. Ezrahi considers the work from a philosophical point of view. The other contributions are mainly concerned with scientific matters. I especially enjoyed Weatherall's contribution, perhaps because he writes as a physician-scientist. I would find a modern day *Daedalus* written by him especially rewarding, instructive, and thought provoking.

ALAN EMERY