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## BOOK REVIEWS

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**Gene Therapy: A Handbook for Physicians.** K W Culver. (Pp 117.) UK: Mary Ann Liebert Publishers. 1994.

The foreword sets the scene. "The recombinant DNA process patented in 1980 opened stunning possibilities that, in a single decade, brought the concepts of 'inborn errors of metabolism' . . . and 'the double helix' to the bedside of a critically sick little girl. On September 14th, 1990, at 12:52 in the afternoon, Dr Culver inserted a needle into the left hand of that child, started the infusion of genetically repaired cells, and, quite possibly, defined a fundamental change in the

human potential for health." The same Dr Culver is the author of this book, and the event described was the treatment of a child with severe combined immunodeficiency, caused by adenosine deaminase (ADA) deficiency, with T lymphocytes previously removed from the girl's blood, then cultured, transfected with the ADA gene, and re-injected. Clearly, Dr Culver is right at the centre of this gene therapy story and well qualified to write a book on the subject.

But something is wrong. Five years on from that initial injection, no peer reviewed description of the outcome of that work has been published. Sufficient concern has been raised about the scientific rigour of some of the clinical gene therapy trials that early in 1995 Harold Varmus, Director of the US National Institutes of Health, convened two new committees to evaluate both the review process for gene therapy proposals by the Recombinant DNA Advisory Committee (RAC) and the technical state of gene therapy research itself.

It is against this background that one must assess Dr Culver's book. According to the author, it is aimed at physicians who may be asked about gene therapy by their patients but feel ill informed about the subject. Certainly, the work has some attractive features. It is short, succinct, well illustrated, and well referenced. There are a number of useful appendices, for example, Appendix A which lists under "Journals and Periodicals" *Human Gene Therapy* and *Genetic Engineering News*, both also published by Mary Ann Liebert Inc (although not, I was surprised to note, *Gene Therapy*, published by Stockton Press). And in case the reader still feels insufficiently informed about their favourite gene therapy topic, Appendix B lists the telephone numbers of all Principal Investigators who have had protocols approved by the RAC - so why not just call one of them up?

All very cosy, but to me there seems to be a fundamental problem. This is a cookery book of recipes, the end product of which has generally never been made, let alone tasted. Yet by enclosing it in solid red covers, asking the Curator of the National Museum of American History to write the foreword, and spiking it with "historic" photographs from the aforementioned "first gene therapy experiment", a veneer of scientific respectability emerges.

The successful application of gene therapy poses formidable challenges but could bring considerable benefits. Those scientists who have chosen to base their careers on the development of new approaches to gene therapy are brave people and we should salute them. One or two will doubtless become extremely famous (and rich) while the majority labour for years on systems that eventually prove to be of little or no practical use. This book successfully outlines the considerable amount of activity in the field but it is less clear that it will help the physician in the clinic to convey the real state of things to his or her patient.

ANDREW O M WILKIE

**Congenital Limb Deficiencies in Hungary. Genetic and Teratologic Epidemiological Studies.** A E Czeizel, J A Evans, I Kodaj, W Lenz. (Pp 353; \$54.00.) UK: Akademiai Kiado Publishers. 1995.

This book is subtitled "Genetic and teratologic epidemiological studies" and describes a systematic and exhaustive study of nearly 1000 cases with congenital limb deficiency born in Hungary between 1975 and 1984. Hungary maintains a national computerised record of information about malformed infants and pregnancies terminated, because of prenatally diagnosed developmental defects, during the second and third trimester. Through this database all cases with a limb reduction deformity were ascertained and the diagnosis confirmed by personal examination or evaluation of medical records. Hungary has a birth rate of approximately 150 000 per year. Notification to the Hungarian Congenital Abnormality Register (HCAR) is the task of obstetricians and paediatricians and because notification is required every time an affected child is admitted to a medical institution, ascertainment is nearly complete.

The first chapter is a fascinating and well illustrated account of the history of limb defects spanning two and a half thousand years, from the clay tablets of Ninevah to the present day. There follows a description of the Hungarian systems for the evaluation of congenital abnormalities. The design of this study of congenital limb deficiency and the subdivision into isolated cases and those with other congenital abnormalities is discussed. The morphological classification which forms the basis for further evaluation is then introduced. Each of the six morphological groups, terminal transverse, amniogenic, radial and tibial, ulnar and fibular, split hand and foot, and proximal intercalary defects, are then evaluated in a systematic manner.

The study's strengths are the enormous volume of data amassed in a population with nearly complete ascertainment, and the painstaking and detailed manner in which the data have been collected and evaluated. The figures for the prevalence of various categories of congenital limb deficiency are a major contribution to the field. Its main weakness lies in the reliance on a morphological classification as the starting point for epidemiological evaluation of aetiology. Study of the range of limb defects that can be observed in different limbs of a single child, and hence presumably with a common aetiology, casts intuitive doubt on the value of this approach. The eventual aetiological classification of isolated CLD groups ends by citing vascular disruption as an important aetiological factor in four of the six categories, with no recognised factors for atypical split hand and foot and early amnion rupture, arguably itself a result of vascular disruption, cited in the sixth (amniogenic) group.

The disappointing message that emerges from this book is that despite a huge and thorough research effort, only a few environmental factors such as smoking emerge as potential aetiological factors. Even then, the relative risks observed are small.

The book has accompanied me now on two holidays, which suggests that it is not a very easy read! It will not find a place on the bookshelf of most practising clinical geneticists, nor I expect a place in most departmental libraries. It should, however, be required reading for anyone considering setting up a Congenital Abnormality Register, and will be of interest to everyone engaged in research into congenital limb defects.

HELEN FIRTH

**Dermatology and the New Genetics.** C Moss, J Savin. (Pp 198; £49.50) Oxford: Blackwell Science Ltd. 1995.

This book is prefaced with the admirable statement that dermatology needed the new genetics as it had fallen into a rut. Genetic developments have swept through dermatology and the aim of the authors is to "bring the new genetics within the grasp of busy dermatologists".

To this end it has nine chapters dealing with skin development and its disorders, the epidermis and its disorders, the dermis and its disorders, cancer and premature aging, genetically determined benign tumours, genetic inflammatory skin disorders, immunological disorders, and chromosome disorders, ending with a short note on prenatal diagnosis and gene therapy. The chapters are well written and individual disorders are referenced with the MIM numbers. The content is well chosen, referenced, and indexed. I particularly appreciated the section on mosaicism and Blaschko's lines. There are occasional inaccuracies which may well be corrected in a subsequent edition. Colour illustrations are numerous and of good quality, an excellent aid to geneticists using the book as an aid to diagnosis. There is a six page glossary of

genetic terms for the benefit of the non-geneticists for whom the book is primarily aimed.

Overall I feel this book will be useful to both dermatologists wishing to update themselves on genetic developments within the field of dermatology and geneticists counselling patients with dermatological features.

S J DAVIES

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## NOTICES

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### Human Genome Meeting '96

The Human Genome Meeting '96 will be held on 22-24 March 1996 in Heidelberg, Germany. For further information contact HGM '96 Secretariat, HUGO Europe, One Park Square West, London NW1 4LJ, UK. Tel: (44) (171)935 8085. Fax: (44)(171)935 8341.

### 10th World Congress of the International Association for the Scientific Study of Intellectual Disabilities (IASSID)

This Congress will be held on 8-13 July 1996 in Finlandia Hall, Helsinki, Finland. For further information contact the Congress Secretariat, Kansalaiskonsultit-Congress Services, PO Box 762, FIN-00101 Helsinki, Finland. Tel: +358-0-440 822. Fax: +358-0-492 810.

### 5th European Meeting on Psychological Aspects of Genetics

This meeting will be held on 26-28 September 1996 in Rome, Italy. For further information contact Dr G Jacopini, Istituto di Psicologia, CNR, Viale Marx 15, 00137 Rome, Italy. Tel: 0039 6 86090278. Fax: 0039 6 824737.

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