Accordingly, one might wonder whether B27 indexes high testosterone levels in men and B8 indexes low testosterone levels in women. The latter point has been tested explicitly by Gerencer et al., who reported that indeed B8 does index low testosterone levels in women (χ²=5.0, p=0.025). In regard to men, one may exploit the data on their mean testosterone levels by MHC class I antigens published by Ollier et al. These workers published data on 138 healthy males and 71 male patients by 12 different markers at the B locus. The mean testosterone levels of the HLA-B27 positive men ranked respectively second and third out of 12 in the two rankings. These were independent rankings so their joint significance may be assessed by the Haldane-Smith test ² (z=1.64, p=0.05, one way).

I suggest that high testosterone levels are a necessary but not sufficient condition for the expression of HLA-B27 associated disease, and low testosterone levels for the expression of HLA-B8 associated disease.

It is interesting to consider HLA markers and testosterone levels in regard to idiopathic haemochromatosis, a condition in which men outnumber women by about 20 to 1. This disease is reportedly associated with HLA-A3 (risk ratio 8.2) and HLA-B14 (risk ratio 4.7). These antigens are both strongly associated with high testosterone levels in the data of Ollier et al. Their rankings were third out of eight, and first out of eight, and first out of 12 and second out of 12, respectively. Assuming no linkage disequilibrium between these two antigens, it is valid to test the rankings as independent. Tested against chance expectation by the Haldane-Smith test, the rankings jointly just fall short of significance at the 0.01 level (two way), so there is a strong suggestion that high androgen levels are associated with this condition too.

Thus there is substantial evidence for the hypothesis that HLA antigens operate as markers for disease by indexing hormone levels which are pathogenic.

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**BOOK REVIEWS**

HELEN E HUGHES

**The Rubinstein-Taybi Syndrome in the Netherlands: A Clinical Genetic Survey**

In 1985, Dr Raoul Hennekam embarked on a clinical study of Dutch children and adults with the Rubinstein-Taybi syndrome. The results of his endeavours are now available in the form of this short book of 11 articles or chapters, some of which have been published separately in the *American Journal of Medical Genetics*, among others. The size of the book in no way reflects the amount of work involved in producing the very comprehensive data on 45 affected subjects ranging in age from 0 to 60-5 years, and who represent an almost total ascertainment of the syndrome in the Netherlands in the late 1980s.

In a nutshell, these series of articles and extensive bibliography bring together all that is currently known about this well recognised syndrome. As just over a third of Dr Hennekam’s cohort are over the age of 18 years, his findings provide the best available data on the natural history of this syndrome into adulthood. The growth data on the Dutch subjects are combined with those on an additional 50 American patients (Stevens and Blackburn) in order to produce very useful height, weight, height velocity, and OFC curves. The chapter that includes detailed results from the psychological and speech studies is of particular value and the one likely to be of most relevance to parents and caregivers.

This study was initiated by the Dutch parents support group and the results brought together in this book should be available to all professionals involved in the health and educational care of children and adults with Rubinstein-Taybi syndrome. The book also serves as a model to researchers embarking on clinical studies of other syndromes with multiple anomalies retardation in the future. Dr Hennekam is to be congratulated on his efforts, and also on the choice of such a delightful cover photograph.

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**Essential Medical Genetics. 3rd ed.**

This well established and popular basic textbook now enters its third edition with this issue. The format of the book remains unchanged in that there are two sections to the text. The first 11 chapters outline and explain basic genetic principles, while the remaining 10 chapters refer to the modern day practice of medical genetics. This latter comprehensive section covers genetic counselling, prenatal diagnosis, single gene disorders, congenital malformations, and chromosomal disorders.

The topics of population screening and prevention of genetic disease are also included, as are excellent contributions on immunogenetics and cancer genetics. The basic principles section deals with topics such as DNA structure and function, mitosis and meiosis, chromosomes and aberrations thereof, patterns of inheritance, gene mapping, and population genetics. Three brief appendices outline odds and probabilities, simple applications of Bayes’s theorem, and coefficients of inbreeding and relationship. Dividing