

early days, their efficacy is limited and their toxicity substantial, but we may eventually learn how to use them effectively. Interferon has shown activity in chronic myelogenous and hairy cell leukaemia, and in hypernephroma. False hopes, however, have been raised in many desperate patients; and these agents are being used in the same way as chemotherapy, as pretexts for futile investigative and ad-hoc therapeutic exercises, in many medical oncology units. Another hopeful area is the induction of differentiation in certain acute leukaemias, and perhaps squamous cell tumours.

In the 1970s I began my oncology lectures by pointing out that we knew less about the pathogenesis of cancer then than

we did about that of tuberculosis in 1890. Thanks to progress in the molecular biology of neoplastic disease this is no longer true, and basic research on oncogenes and oncogenesis has finally provided medical oncology with a solid pathophysiological foundation. Such basic investigation is a far better object for the public resources allocated to the "war against cancer" than the increasingly sterile pursuit of cytotoxic drug combinations.

REFERENCES

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Ovarian Endocrinology

Edited by S. G. Hillier. Oxford: Blackwell Scientific. 1990. Pp 356. £69.50. ISBN 0-632027320.

Of the endocrine glands, each of us owes more to the ovary than to any other. It provided half our genetic material and the hormonal environment that led to ovulation, successful mating, and early pregnancy. Recent scientific advances in molecular biology and the novel concepts of local paracrine control by cytokines and growth factors have greatly advanced our understanding of ovarian endocrinology. Nevertheless, despite the apparently spectacular impact of some modern reproductive technologies, such as in-vitro fertilisation and gamete intrafallopian transfer, on the treatment of infertile couples, the application of science to the clinic has not always been rigorous—especially when it comes to clear definition of diagnostic categories and objective assessment of therapeutic success.

This dichotomy is amply illustrated in this multi-author book. The first seven chapters give excellent accounts of the physiology, biochemistry, and molecular biology of the ovary; all are well structured, comprehensive, and up-to-date. However, the standard drops strikingly when clinical aspects are discussed. 58 pages devoted to so-called luteal dysfunction contain no convincing evidence for a clear link with infertility nor for the existence of supposed entities such as "luteinized unruptured follicles" or "mild hyperprolactinaemia". Half this space is given to a rather thin and anecdotal contribution on the far more important topic of hormonal manipulation of follicular function. Hillier's book can be strongly recommended for its excellent reviews of the science underlying recent exciting developments in our knowledge of ovarian endocrinology, but those who are more interested in their clinical applications will be disappointed.

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Handedness and Developmental Disorder

D. V. M. Bishop. Oxford: Blackwell Scientific. 1990. Pp 208. £21.00. ISBN 0-632028424.

People are peculiarly asymmetrical. At least four independent levels of lateralisation can be identified:

molecular, in that all our sugars are dextro and our aminoacids laevo; visceral, as only 1 in 20 000 people do not have their heart on the left side; neural, so that 90% of the population use the left hemisphere for writing and for speaking; and symbolic, with synonyms for left used pejoratively in many societies, in terms such as sinister and gauche.

Dorothy Bishop's excellent and scholarly monograph is concerned principally with left-handedness, which has been related to conditions as varied as epilepsy, mental retardation, autism, dyslexia, and stuttering. Her critical account indicates that the evidence for many such associations is dubious—maintained not by hard scientific data but by symbolism, which deems that if left-handedness is construed as bad, wrong, or awkward, then it must necessarily be associated with disease and depravity. The poverty of much theorising is seen, as Bishop points out, when different authors can state that dyslexia is associated with mixed handedness, strong left-handedness, strong right-handedness, and lack of strong right-handedness. She ends her book with a detailed review of Geschwind, Behan, and Galaburda's much publicised, much cited theory which associates left-handedness, dyslexia, and mathematical ability with autoimmune diseases such as myasthenia gravis, asthma, and ulcerative colitis. Testosterone is the putative common agency, suggested to impair or to retard development of both the immune system and the left cerebral hemisphere. Bishop finds few firm foundations to support this elaborate theoretical superstructure: the enduring appeal of the hypothesis seems best explained by linkage of the ancient symbolic dichotomy of right versus left with two others, male against female and health *vs* disease. Symbolism again, not neurology.

Left-handedness and right-handedness, the only major behavioural polymorphism, is an intriguing phenomenon and a challenge for neurobiologists. Bishop provides an accurate and intelligent account of the problems of measurement and definition, and of the genetics and development of handedness. In striking contrast to much published work on this topic, too often accompanied by woolly, half-worked ideas, her monograph clearly and fairly outlines these difficult concepts.

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