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Book Review

Molecular Genetics of Pediatric Solid Tumors: Basic Concepts and Recent Advances

G.P. Tonini, R. Sansone and C.J. Thiele. Harwood Academic Publishers, 1992. ISBN 3 7186 5080 0. £25.00, US$45.00.

ONLY ONE in 800 children are affected by cancer which makes it a relatively rare disease. These children, however, have not received constant exposure to environmental carcinogens so what is responsible for their tumours? In many cases, either through family pedigree studies or mathematical considerations of incidence versus frequency of these cancers, it has been shown that they may be due, at least in part, to a hereditary predisposition. Histopathological analysis of many children's tumours show that they consist of relatively undifferentiated cells. Thus, it appears as if cells do not respond to the signals that normally tell them to differentiate during embryogenesis. The isolation of genes responsible for these phenotypes is therefore an exciting venture since we are not only looking at genes which cause cancer, but also genes which likely control normal developmental processes. This is an important consideration since, if cells become far too committed down to terminal differentiation, they lose their ability to divide in a controlled fashion which is a hallmark of cancer cells. The relationship between development and cancer has not gone unnoticed by laboratories specialising in the analysis of the genetic predisposition to cancer. The opportunity for fame and funding has made the study of childhood cancer very competitive and in many cases their analysis has been at the forefront of the highest technology in molecular biology. This fact makes 2 weeks a long time in the study of some of these tumours and it must always be accepted that books reviewing these topics will, inevitably, be somewhat out of date by the time the book is published. Given the now quite commonplace application of molecular diagnostics to genetic screening and genetic counselling and the future opportunities for gene and antisense oligonucleotide therapy it is important that clinicians and non-molecular scientists understand and incorporate the basic technology and jargon of molecular biology into their everyday thinking of clinical and biological problems. The declared aim of the book edited by Tonini *et al.* is to 'fill the gap between advanced research and clinical practice'. The book addresses three general areas; (1) the molecular biology of specific paediatric tumours incorporating cytogenetics of brain tumours, (2) review chapters about the genetics of cancer and (3) selected methodologies used in the analysis of cancer such as flow cytometry and transgenic mouse systems. The authorship is largely Italian based with a few chapters from the U.K., U.S.A. and Germany. The strengths of the book are undoubtedly the chapters written by several experts who have been actively involved in the analysis of tumours in which they have published extensively over the past few years, such as retinoblastoma, Wilms' tumour, neuroblastoma and rhabdomyosarcoma. Whilst it is hard to present data that is up to date in such a rapidly moving field, I felt that these chapters discussed the molecular mechanisms of oncogenesis in paediatric solid tumours in some detail and were well referenced. The more general chapters, however, I found less instructive and mainly presenting reportage. Thus, chapters about particular aspects of cancer such as 'fragile sites' and 'cellular oncogenes' are more philatelic without too much interpretation of the data. Although the aim of the book is to bridge the gap between front line science and clinical research, I thought that chapters on flow cytometry techniques and mouse neuroblastoma models somewhat out of place. Included in this volume are several chapters discussing chromosome abnormalities in childrens tumours which, although not strictly molecular, provide the background into the usefulness of these observations in gene cloning. However, there is considerable duplication of information within these review chapters, and between these and the specialist chapters. In addition, several chapters seem out of place in the molecular genetics background, such as the role of neuropeptides in neuroblastoma and it is not altogether clear why some have been included. Despite its strengths, I doubt that I would suggest reading this book from cover to cover but rather to consult it occasionally for specific information, especially since there have been a number of other books published over the past few years addressing the subject of tumour suppressor genes, many of which have covered the subject in far more detail.

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News

Report of an International Workshop on Perspectives on Secondary Prevention of Laryngeal Cancer

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ON 21–23 NOVEMBER 1991, an international workshop aiming at evaluating the perspectives for secondary prevention of laryngeal

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The above were participants to the workshop. Chairman: A. Sartoris. Rapporteur, Vice-Chairman N. Segrian and Chairman of the Oncological Committee of the Region Piemonte: B. Terracini.
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