*Anti-Cancer Drugs*, **3**, pp. 301–302

# Book reviews

## The Status of Differentiation Therapy of Cancer—Vol II (Serona Symposia Publications—Vol. 82)

S Waxman, GB Rossi and T Takatu
New York: Raven Press.
ISBN 0-88167-792-2.
Library of Congress Catalog Number 91-052612

The Conference on Differentiation Therapy, which had its first meeting in 1986 in Sardinia, is organized to promote the applications of differentiation therapy as a cancer treatment. The fourth meeting took place at the end of 1990 in Japan and the proceedings thereof are dedicated to Professor Fumiaro Takaktu who retired from the Faculty of Medicine, University of Tokyo on December 31, 1990.

The goal of these conferences is to bring together scientists studying different aspects of the many problems of cell growth and differentiation. The organization is comprised of 10 working subgroups, has over 250 participants, and covers basic mechanisms of growth and differentiation through application and use in clinical trials.

The proceedings of the fourth conference are aimed at providing an up-to-date overview of differentiation therapy. The reports of the various co-chairmen and several of the plenary speakers are presented in this volume. Among the 56 contributors, 31 were from the USA, 14 from Japan, four from Israel, three from Italy and two each from France and the UK.

The various topics covered included the regulatory mechanisms for growth and differentiation in normal and malignantly-transformed cells, gene expression as targets for differentiation therapy, growth and differentiation factors as targets for tumor suppression, biological modification as an approach to differentiation design, mechanism of action and novel differentiation inducers, the incorporation of differentiation therapy into combination cancer therapy programs, and clinical trials of differentiation therapy.

*W de Jong*

## Pathobiology of Human Germ Cell Neoplasia

JW Oosterhuis, H Walt and I Damjanov
195 pp. with 48 figs.
Berlin: Springer-Verlag, 1991.
ISBN 3-540-53928-X.
DM 139.

Germ cell tumors, not long ago lethal for most patients, have become a prototype of successful chemotherapy. The major advances in chemotherapy of malignant germ cell tumors attracted the attention of the medical world to these tumors.

About 10 years ago the cloning of cell lines of human germ cell tumors was introduced, aiming to provide tools to study human developmental biology. These lines were also employed to investigate the biology of human germ cell neoplasia. It is certain that students of human germ cell biology can learn a lot from development biologists, in particular those who use murine teratocarcinoma as models. The reverse is also true. To stimulate this mutual learning process, a Symposium on Pathobiology of Human Germ Cell Neoplasia was organized in 1989 in Groningen, The Netherlands, as a satellite meeting of the Congress of the International Society of Development Biologists.

This book, based on the symposium, gives information about the recent progress made in the area of pathobiology of human germ cell malignancies, with 19 contributors, all experts in the fields of pathology, developmental biology, genetics, molecular biology and other related fields, from Western Europe, Czechoslovakia and the USA providing chapters on cells of origen (carcinoma *in situ*), cell lines, differentiation of anti-gens, chromosomal research, molecular genetics and growth factors and their receptors.

The book offers an awareness and understanding of germ cell tumors from the earliest stages to their various differentiations. It contains information necessary to everyone working in clinical and preclinical areas connected with germ cell tumors.

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## Hereditary Tumors (Serono Symposium Publication)

ML Brandi and R White (Editors)
New York: Raven Press, 1991.
218 pp. ISBN 0-88167-784-1,
$82.50.

The somatic mutation theory on the origin of cancer, which was developed at the beginning of this century, celebrated its victory 10 years ago when oncogenes, activated by either point mutations or chromosome translocations, were found to be present in many different kinds of tumor.

In 1971 Alfred Knudson laid down a unifying concept for somatic mutation and hereditary tumors. He speculated that in the case of a genetically determined malignancy a single mutation was present in the germ line and that a single somatic mutation in the allele of the mutated gene was needed to give rise to a tumor cell. In the case of the sporadic form of that tumor, somatic mutations in both wild-type alleles would be needed. The molecular biological investigations of WK Cavenee on retinoblastoma have led to the validation of this hypothesis, finally leading to the isolation of the retinoblastoma (Rb) tumor suppressor gene. Thus, molecular biological research of human tumors is present, if being dominated by the search for inactivated tumor suppressor genes.

Many symposia are organized about tumor suppressor genes and hereditary tumors. Such a symposium was held in Florence in April 1991 and in the fall of that year these proceedings were published.