

ADVANCES IN COMPARATIVE LEUKEMIA RESEARCH 1981

DAVID S. YOHN and JAMES R. BLAKESLEE
Editors

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Proceedings of the Xth International Symposium for Comparative Research on Leukemia and Related Diseases, held at The University of California, Los Angeles, U.S.A., August 31–September 4, 1981.

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ELSEVIER BIOMEDICAL
NEW YORK • AMSTERDAM • OXFORD

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Published by:

Elsevier Science Publishing Co., Inc.
52 Vanderbilt Avenue, New York, New York 10017

Sole distributors outside the USA and Canada:

Elsevier Science Publishers B.V.
P.O. Box 211, 1000 AE, Amsterdam, The Netherlands

ISBN 0-444-00720-2

Manufactured in the United States of America

DEDICATION

These proceedings are dedicated to the memory of Dr. Leon Dmochowski, Professor Emeritus of Virology at the University of Texas System Cancer Center and M.D. Anderson Hospital and Tumor Institute, who died on August 26, 1981. Dr. Dmochowski was born in Tarnapol, Poland, on July 1, 1909. He grew up in Poland and graduated with distinction in Greek, Latin, Mathematics, and Physics, from the University of Lwow, Lwow, Poland. He received his Medical Degree with Distinction from the University of Warsaw.

Dr. Dmochowski began his career in cancer research as a student in Poland. His interest in physics lead very early to an interest in electronmicroscopy. This interest combined with an interest in serology and genetics led to a study of Rous sarcoma in chickens.

He moved to England, became a British subject and was licensed to practice medicine in England, but instead sought the Ph.D. receiving it with distinction from the University of Leeds, in Leeds, England. In 1939 he became a research scientist at the Imperial Cancer Research Fund in London. It was this experience that convinced him that electronmicroscopy had an important role to play in cancer research. He subsequently moved back to Leeds where he became a Lecturer in Experimental Pathology and Cancer Research in 1949 and the following year became the first Reader in Cancer Research at the University of Leeds.

In 1954 he was invited to visit Columbia University, College of Physicians and Surgeons. While there he met Dr. R. Lee Clark who invited him to move to Houston as Chief of the newly formed Section of Electronmicroscopy and Virology at the M.D. Anderson Hospital and Tumor Institute. Dr. Dmochowski was convinced that viruses recently demonstrated to cause mouse leukemia were also important in the etiology of human leukemia and perhaps other human tumors as well. His search for a viral etiology for human leukemia, lymphoma, breast and prostatic cancer became his career goals. His demonstration in 1956 by electronmicroscopy of structures in the leukemic tissues of a young patient at M.D. Anderson Hospital and Tumor Institute was a seminal finding which gave impetus to a major nationwide research program on potential human tumor viruses, a search that still exists. Within the next few years he discovered and published his observations of structures resembling mouse mammary tumor viruses in human breast tumors and in human milk. His work also helped establish the relationship between the so called B particles in mouse milk and the transmissibility of mouse mammary cancer from mother to offspring.

Dr. Dmochowski was a founding member of the task force which established the special virus leukemia program which ultimately became the Virus Cancer Program of the National Cancer Institute. This program catalyzed and fostered a generation of investigators which have made significant contributions not only to oncology but to biology, immunology, molecular biology and other fields.

He was a devoted teacher and his students occupy research positions all over the world. His death this year is a great loss, not only to his wife, Shiela, and his son, Roger, but to his colleagues, students, and friends all over the world.

Dr. Dmochowski served with distinction on the Board of Trustees of the Leukemia Society of America. In October of 1980 the Society awarded him their Dr. John Kenny Award for distinguished service in leukemia research.

Although Leon Dmochowski worked in all areas of cancer research, one of his most devoted interests was the study of the etiology and biology of leukemia in animals and man. His vision early in his career has given impetus to present research in a broad area of cancer related problems and will continue to influence this field for years to come. It is appropriate then that we dedicate this compendium of papers on Comparative Leukemia Research to the memory of Leon Dmochowski since it represents an important contribution to our understanding of the problems to which he devoted his career.

James M. Bowen, Ph.D.
Associate Vice President for Research
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Cancer Center
M.D. Anderson Hospital and
Tumor Institute

PREFACE

Attending the Xth International Symposium for Comparative Research on Leukemia and Related Diseases were nearly 400 scientists from 20 countries throughout the world. This symposium continued the tradition of emphasizing comparative aspects of leukemia research in man and animals including non-vertebrate species.

Each section of these proceedings contains overviews and review summaries as well as summary reports presented in the workshops related to the respective sectional topics; the sections are Epidemiology, Cell Biology, Immunology, Virology and Clinical Aspects of Leukemia. Reports from 160 scientists who contributed to the 11 workshops held during 4 afternoons of the symposium are recorded herein. Space limitations did not permit publication of the highly active discussions.

These proceedings continue to be the repository of our progress in understanding and controlling leukemia and related diseases in man and other animals.

David S. Yohn, Ph.D.
Secretary General

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When Robert Roesler de Villiers died of leukemia at the age of 16 in New York Hospital in 1944, his family and friends decided to do something meaningful in his memory. They were shocked by the swiftness with which the disease took his life and the inability of the medical profession to combat it.

They established the Robert Roesler de Villiers Foundation in New York City in 1949 "to assist in the education of boys and young men, and to provide financial support for both individuals and institutions for the study of and research into the causes of leukemia, its treatment and cure."

Renamed the Leukemia Society, Inc. in 1954, the organization became the Leukemia Society of America, Inc. in 1967 in recognition of widening public interest.

The main objective of the foundation was to encourage leukemia research on a worldwide basis. The Robert Roesler de Villiers Award was created to honor the achievements of medical scientists in leukemia research. The award consists of a gold medal and \$1,000. It is the Society's highest honor.

The first de Villiers award was presented in 1953 to Ludwik Gross, M.D., Chief of Research at the Bronx Veterans Administration Hospital in New York City, for his pioneering work in isolating a mouse leukemia virus. Since then, the Society has presented the award 12 times.

Other recipients throughout the years include:

1956-Drs. Leon O. Jacobson and John F. Loutit

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1977-Dr. Joseph H. Burchenal

1979-Dr. Emil J Freireich

1981-Dr. Lloyd J. Old

PRESENTATION OF THE 1981 de VILLIERS AWARD

presented to

Lloyd J. Old, M.D.

Vice-President and Associate Director

Sloan-Kettering Institute for Cancer Research, New York City

Dr. Lloyd J. Old's additions to what we know of leukemogenesis are recognized by scientists world-wide. He has pioneered in cancer therapy - in nonspecific immunotherapy with his discovery of the antitumor effect of BCG and tumor necrosis factor, and in enzyme therapy with his progressive advance on L-asparaginase.

Together with his colleagues, specific contributions embody: gene association in the major histocompatibility locus with susceptibility to mouse leukemia; description of mouse cell surface antigens; recognition of trisomy 15 as a common feature of mouse leukemia; definition of preleukemic changes in AKR mice leading to the discovery of the dualtropic class of MLV's; demonstration that feline leukemia virus is spread horizontally; recognition of association between carcinoma of postnasal space and Epstein-Barr virus; dissection of humoral immune reactions to humans to surface antigens of human cancer cells with discovery of antigens that appear tumor-specific.

Dr. Old is Vice-President and Associate Director of Research at Memorial Sloan-Kettering Cancer Center and Professor of Biology, Graduate School of Medical Sciences, Cornell University in New York City.

With great pride we present the 1981 Robert Roesler de Villier Award to Dr. Lloyd J. Old.

Kenneth McCredie, M.D.

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