

December 1, 1989



Cancer Research

OFFICIAL JOURNAL OF THE AMERICAN ASSOCIATION FOR CANCER RESEARCH

VOLUME 49 • NO. 23 • PP 6449-6877

ISSN 0008-5472 • CNREA 8



Report on the First Joint Meeting of the AACR and the Japanese Cancer Association— see page 6852

THE AMERICAN ASSOCIATION FOR CANCER RESEARCH ANNOUNCES

AACR Special Conference in Cancer Research

STEROID RECEPTORS, TRANSCRIPTION FACTORS, AND GENE EXPRESSION

February 10-13, 1990
Catamaran Resort Hotel, San Diego, California

PROGRAM COMMITTEE

Bert W. O'Malley, Chairperson
Ronald M. Evans Marc E. Lippman

SCIENTIFIC PROGRAM

OVERVIEW

I. Herskowitz, San Francisco, CA
W. McGuire, San Antonio, TX

STEROID HORMONE RECEPTORS

R. Evans, San Diego, CA
B. O'Malley, Houston, TX
P. Chambon, Strasbourg, France
H. Samuels, New York, NY

TRANSCRIPTION FACTORS

R. Roeder, New York, NY
R. Tjian, Berkeley, CA
L. Guarente, Cambridge, MA
A. Greenleaf, Durham, NC

RECEPTORS AND GENE EXPRESSION

M. Beato, Marburg, FRG
J.-A. Gustafsson, Huddinge, Sweden
P. Mellon, La Jolla, CA
D. Shapiro, Urbana, IL

GENE TRANSCRIPTION AND DEVELOPMENT

M. Green, Cambridge, MA
A. Wolffe, Bethesda, MD
V. Pirrotta, Houston, TX
M. Rosenfeld, La Jolla, CA

SIGNALS FOR TRANSCRIPTIONAL CONTROL

J. Baxter, San Francisco, CA
G. Schutz, Heidelberg, FRG
R. Kornberg, Stanford, CA
M. Tsai, Houston, TX

ONCOGENES, HORMONES, AND CANCER

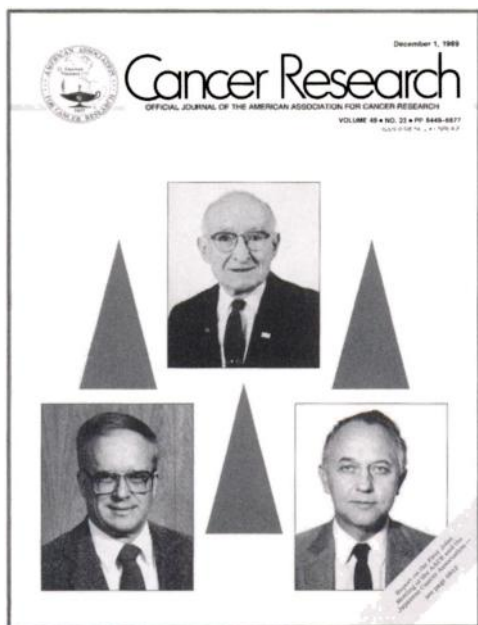
E. Ziff, New York, NY
B. Groner, Basel, Switzerland
I. Verma, San Diego, CA
M. Lippman, Washington, DC
B. Katzenellenbogen, Urbana, IL

INFORMATION AND APPLICATION FORMS

American Association for Cancer Research
330 Market Street, 2nd Floor
Philadelphia, PA 19106
215-440-9300
215-440-9313 (FAX)

APPLICATION DEADLINE: DECEMBER 11, 1989
Late applications will be accepted on a space-available basis.

COVER LEGEND



The current focus on strategies for human cancer prevention has brought a role of dietary selenium to the fore and calls attention to three pioneers for their contributions to the early recognition of this element as a preventive agent. Although the nutritional essentiality of selenium dates back to 1957, early and mistaken evidence of carcinogenicity forbade any human application, under the Delaney Clause of the Food Additive Amendment, which prohibits the incorporation into food of any substance found to induce cancer in any animal. Douglass V. Frost was the first to challenge this view, and after repeatedly urging the government to recognize the nutritional value of selenium, he and Shamberger reported an epidemiological study suggesting that selenium might prevent rather than cause cancer (*Can. Med. Assoc. J.*, 100: 682, 1969). This germinal paper did much to stimulate interest in selenium as a cancer-preventive agent.

Independently, Gerhard N. Schrauzer, with his students Rhead and Ishmael, deduced that selenium was a potential human cancer-protective agent [*Experientia (Basel)*, 27: 1069, 1971]. Subsequently, Schrauzer, Shamberger, Ip, Griffin, and many others have provided a wealth of evidence that cancer incidence in a variety of animal systems can be lowered by selenium.

Epidemiological evidence for a protective action of selenium against aflatoxin B₁-induced liver cancer has been reported in a high incidence area of Qidong County in the Peoples Republic of China. Pilot studies toward prevention by dietary selenium enrichment are under way there.

The nutritional significance of, and a plausible role in cancer prevention for, selenium can be accounted for at least in part by the discovery by Rotruck *et al.* [*Science (Wash. DC)*, 179: 588, 1973] that it is an essential component of glutathione peroxidase. This enzyme is a key to the destruction of peroxides, thereby defending against cell damage leading to cancer by lipoperoxides and various free radical oxidants. Further information may be found in: R. J. Shamberger. *Biochemistry of Selenium*. New York: Plenum Publishing Corp., 1983; G. N. Schrauzer (ed.). *Selenium, Present Status and Perspectives in Biology and Medicine*. Clifton, NJ: Humana Press, 1988; Combs and Combs. *The Role of Selenium in Nutrition*. New York: Academic Press, 1986.

Douglas V. Frost, *top*, is retired after many years on the research staff of Abbott Laboratories. He organized numerous symposia on selenium and was a consultant in nutritional biochemistry to the National Academy of Science Committee on Selenium in Animal Nutrition. Gerhard N. Schrauzer, *lower right*, is Professor of Chemistry and Biochemistry at the University of California, San Diego. Raymond J. Shamberger, *lower left*, is now Senior Project Scientist, Ciba-Corning, Oberlin, Ohio, after many years at the Cleveland Clinic.

We acknowledge the assistance of Arthur Furst in preparing the legend and supplying the photographs.

Sidney Weinhouse