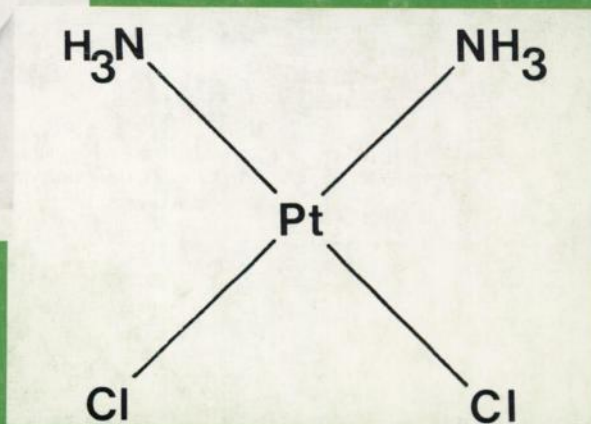
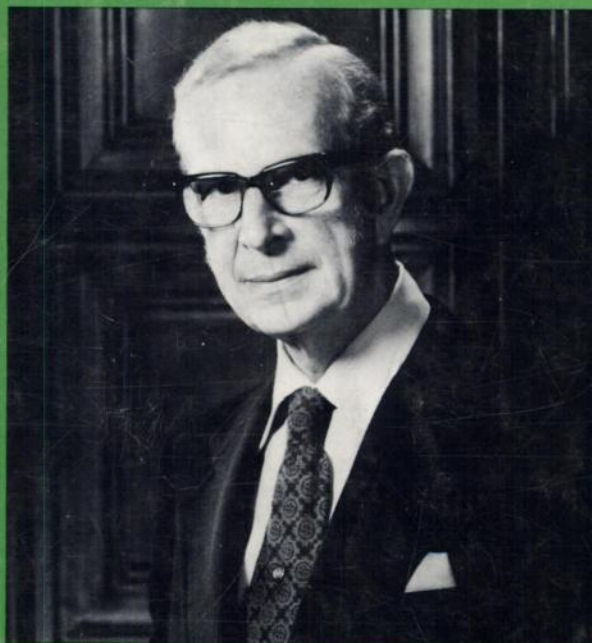


# Cancer Research

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June 1982



# Promising Progress In Cancer Research With 5-Thio-D-Glucose

Current research has developed two highly significant effects of 5-Thio-D-Glucose in the treatment of cancer cells. First, it is highly effective in killing hypoxic cells, particularly under hyperthermia or radiation. Equally important, it has demonstrated exceptionally strong radiation protection for oxyc cells.

While possessing chemical properties similar to natural D-Glucose, 5-Thio-D-Glucose inhibits transport and cellular uptake of D-Glucose. It sensitizes hypoxic cells to radiation and kills them preferentially. Also, radioresistant hypoxic cells in tumors may be treated effectively by a combination of mild hyperthermia and 5-Thio-D-Glucose with minimal damage to normal tissues.

Other research has shown 5-Thio-D-Glucose useful as a non-toxic agent to control male fertility, by inhibiting spermatogenesis. Similarly, it inhibits the growth of parasites with a high D-Glucose requirement.

Get acquainted with this fascinating sugar analog. Use coupon below to request technical literature and bibliography.

#### CAUTION:

**5-Thio-D-Glucose can be used only for chemical or investigational use**

This product may not be used or sold as a drug, food, or food additive, as defined in the Federal Food, Drug and Cosmetics Act, except for investigational use only in laboratory research animals or for tests in vitro. Not for use in humans.

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## HEALTH EFFECTS OF LOW LEVEL EXPOSURE TO RADIATION

A Comprehensive Symposium  
August 22-27, 1982  
Snow Mountain Ranch, Colorado

During each day of this symposium, in-depth discussions will be presented on data concerning the health effects of radiation, critical analyses of studies contributing to these data, standards for protection against radiation, nuclear power and its alternatives, problems of waste disposal, cost/benefit and risk/benefit analyses, etc. Although all topics will be explained in depth, no particular background in the subjects will be required of participants. On some evenings, general sessions of interest to attendees and spouses will be presented on topics such as x-ray mammography, Three-Mile Island, truths and fallacies concerning radiation exposure, etc. Ample time for discussion of topics will be included in the program.

Snow Mountain Ranch is a 2500 acre mountain resort located in Arapahoe National Forest near Rocky Mountain National Park. The resort caters to family lodging at reasonable prices, and provides extensive recreational facilities such as tennis, swimming and roller skating. Organized youth programs and craft classes will be available each day. Transportation to and from Denver will be coordinated by meeting organizers. Registration for the symposium is limited, and reservations will be accepted on a first-come, first-served basis. Further information is available from:

Office of Post Graduate Medical Education  
University of Colorado Health Sciences Center  
4200 E. Ninth Avenue (#C-295)  
Denver, Colorado 80262  
(303) 394-5241

*(CME credits have been applied for from the AMA and ABHP)*

## WILMOT CANCER RESEARCH FELLOWSHIPS

The University of Rochester School of Medicine offers research training to individuals with the M.D. degree and at least one year of postdoctoral experience. Research fellows can train for up to three years in any discipline relevant to the cause, diagnosis, treatment or prevention of cancer. Training is available in fields such as: endocrinology, experimental therapeutics, genetics, hematology, immunology, microbiology, molecular and cellular biology, pathology, and radiation oncology.

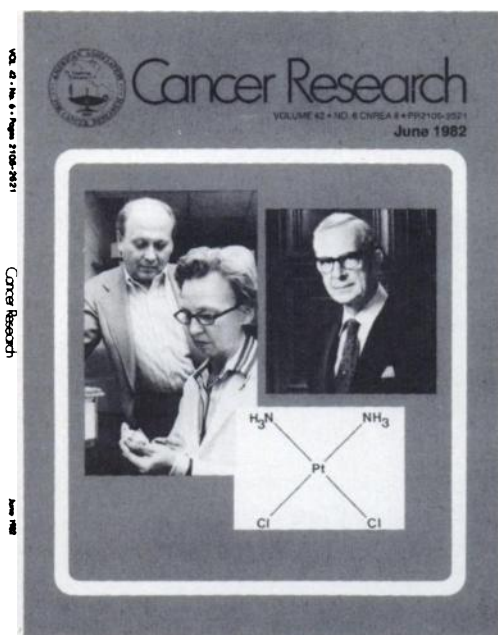
Stipends range from \$27,000 to \$30,000, depending on the number of years since the M.D. degree was achieved. There is also an annual allowance of \$6,000 for other research costs.

For further information, contact:

WILMOT CANCER RESEARCH FELLOWSHIP PROGRAM  
Box 706  
University of Rochester  
School of Medicine & Dentistry  
601 Elmwood Avenue  
Rochester, NY USA 14642



# COVER LEGEND



Barnett Rosenberg, Ph.D., Professor of Biophysics at Michigan State University, East Lansing, in 1965 observed that cell division and filamentation of *Escherichia coli* were inhibited by compounds of platinum formed as electrolysis products from a platinum electrode [Nature (Lond.), 205: 698, 1965]. This suggested to him that platinum coordination compounds might have antineoplastic activity. He and his group demonstrated that the biological effect was due to *cis*-dichlorodiammineplatinum (*cis*-platin) (J. Bacteriol., 93: 716, 1967; J. Biol. Chem., 242: 1347, 1967) and that the compound had chemotherapeutic effects in

tumor-bearing animals (Cancer Res., 30: 1799, 1970).

Rosenberg's work was extended in several laboratories and clinics. The first clinical trials were conducted at the Wadley Institutes of Molecular Medicine in Dallas, Texas, by a group headed by Joseph M. Hill, M.D. The results were presented in 1971 in Prague (VII International Chemotherapy Congress, Prague, August 1971, p. 188), as well as in the *Wadley Medical Bulletin* (1: 121, 1971). Phase I clinical trials were also performed at the Roswell Park Institute, Buffalo, N. Y. [D. J. Higby *et al.*, Cancer (Phila.), 33: 1219, 1974]. L. H. Einhorn and coworkers at Indiana University reported that *cis*-platin in combination chemotherapy improved responses in patients with disseminated testicular cancer (Ann. Intern. Med., 87: 293, 1977). Since then, platinum compounds have gained a place in the chemotherapy of testicular and ovarian neoplasms. They represent a new class of antineoplastic compounds, found on the basis of serendipity and persistence. A review by A. W. Prestayko (Cancer Treat. Rev., 6: 17, 1979) summarizes the information and *Cancer Treatment Reports* devoted an issue to *cis*-platin (63: 1431, 1979).

Pictured are Professor Rosenberg (watching his long-time associate, Mrs. Loretta Van Camp, inject *cis*-platin into a mouse with cancer) and Dr. J. M. Hill. The chemical formula is of *cis*-dichlorodiammineplatinum (*cis*-platin).

We are indebted to Drs. Rosenberg and Hill for the illustrations and information.

M.B.S.