The June issue of *Cancer Chemotherapy Reports* reminds this reviewer of the contemporary bit of humor used frequently in the entertainment media, i.e., it has some good news and some bad news for its readers. First the bad news.

Chromomycin A₃ or toyomycin is an antibiotic isolated from *Streptomyces griseus*. As is well appreciated, natural products from such cultures have proved clinically very useful in the past. Further, the early studies reported from Japan and South Africa with chromomycin A₃ in over 500 patients were said to demonstrate objective responses of 35 percent in gastric and colorectal cancer, 45 percent in sarcomas of the bone and soft tissues, and 73 percent in lymphomas. Toxicity in these early reports was quite manageable and specifically did not involve the hepatic or renal systems. However, in a study by Kovach, et al. (Mayo Clinic, Rochester, Minnesota) hepatic and renal toxic effects were quite prominent as dosages of the drug were increased. In addition, hypocalcemia was noted and this may have been related to the similarity of chromomycin A₃ to mithramycin. Apparently, the renal toxicity may represent a major problem in the use of the agent. Although this phase I study was not designed to evaluate antitumor activity, none was seen in the 14 patients with measurable disease generally of a gastrointestinal origin.

These same authors conducted a phase II study of cis-diaminedichloroplatinum in advanced carcinoma of the bowel at a schedule of 50 mg./m² repeated every 5 weeks. No responses were seen. Toxicity included mild and reversible renal impairment and hearing loss. This is certainly discouraging information. The compound had enormous promise because it represented a new class of agents exhibiting considerable activity in murine screens.

Land, et al. (Southwest Cancer Chemotherapy Study Group, M.D. Anderson Hospital and Tumor Institute, Houston, Texas) tested 5-fluorouracil and actinomycin D in acute childhood leukemia. Certainly these drugs have demonstrated activity in a number of clinical tumors and one would anticipate that in acute leukemia of childhood, one of the most "treatable" diseases, important activity would be seen. However, the authors note that 5-fluorouracil was of no benefit in inducing remission and neither drug was of benefit in
maintaining an induced remission from previous therapy. Perhaps the fact that these children had previously been treated extensively may have influenced such a response. However, there is little clinical evidence to suggest cross-resistance between these agents and those commonly used in primary and secondary therapy of leukemia.

And now the good news. 5-Azacytidine is reported by McCredie, et al. (M. D. Anderson Hospital, Houston, Texas) to possess important activity in inducing complete and partial remissions in patients with acute leukemia who have failed to respond to chemotherapy with other agents. Since the agent has demonstrated synergism in laboratory animals with both L-asparaginase and 6-thioguanine, and has been found active in murine tumor systems resistant to cytosine arabinoside, vincristine, 6-mercaptopurine, thiosemicarbazone, and BCNU, the news from Texas is welcomed indeed.

Two new compounds from abroad are said to have promising activity. The first, a homo-aza-steroidal ester of p-[N,N-bis(2-chlorethyl)amino]phenylacetic acid, has only had trials in animal tumor systems in Greece. The second, however, butocine, has shown clinical activity in patients with generalized carcinoma of the breast in Czechoslovakia. Further, the compound was not associated with toxic side effects, even after a long-term therapy. It will be interesting to see whether these agents come to clinical trial in the United States, and to review later our own experiences.

Vogel, et al. (Uganda Cancer Institute, Kampala) discuss the use of BCNU and bleomycin in the treatment of Kaposi’s sarcoma. The authors noted that for this tumor, which is at times particularly virulent, there are now several agents with effective activity. In addition to the drugs noted in the present report, the authors call attention to the activity of vincristine and actinomycin D and ask for their use in combination therapy. This article and others from Uganda in the past continue to focus attention on the usefulness of the therapeutic efforts carried out at this Center.

Chirigos, et al. (National Cancer Institute, Bethesda, Maryland) write on effects of streptonigrin and its analogs on oncornavirus replication and DNA polymerase activity.
Streptonigrin has not been used in clinical trials at all recently, but in the past it has demonstrated activity against certain lymphomas and chronic lymphatic leukemia. Streptonigrin's lack of major activity has resulted in its essentially being dropped from major clinical studies. The authors note, however, the important effects of the agent and its analogs in inhibiting systems which may be the key to both cancer induction and virus spread. This evidence may stimulate renewed interest in the compound, particularly since the rifampicin derivatives which have a similar *in vitro* activity have as yet not been shown to be clinically useful drugs.

Finally, Heyes, et al. (Beecham Research Laboratories, Surrey, England) describe a series of new imidazole derivatives with antitumor effects at least as impressive as the better known and clinically tested triazeno imidazole carboxamide (NSC-45388; DIC). These new agents appear to be less toxic in animal systems and therefore may serve to improve the already impressive antitumor activities of these derivatives in man.

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**The Need for Basic Research**

Bacon valued science both as an end in itself and for the immense power over nature which he believed it could give. . . . He was firmly convinced that it is fatal for scientists to work short-sightedly at the solution of this or that particular problem. Let them concentrate, he thought, on discovering by suitably designed experiments and appropriate reasoning the fundamental laws and structure of nature. Then, and only then, could they make innumerable practical applications with complete certainty of success.—Professor C. D. Broad, "Bacon and the Experimental Method." In: *A Short History of Science: Origins and Results of the Scientific Revolution. A Symposium.* Garden City, Doubleday Anchor Books, 1951. P. 31.