<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1099</td>
<td>The Enzymology of the Formation and Interconversion of Labile 1-Carbon Groups in Five Hepatomas and in Walker Tumor 256.</td>
<td>Raymond Lepage, Lionel A. Poirier, Miriam C. Poirier, and Harold P. Morris.</td>
</tr>
<tr>
<td>1104</td>
<td>The Hepatic Activities of 1-Carbon Enzymes during the Chronic Administration of Diethylaminothion, 2-Acetylaminothionoure, and N,N-Dimethyl-4-aminoazobenzene to Rats.</td>
<td>Miriam C. Poirier, Lionel A. Poirier, and Raymond Lepage.</td>
</tr>
<tr>
<td>1117</td>
<td>Identification of Contaminating Clostridium Spores as the Oncolytic Agent in Some Chalone Preparations.</td>
<td>U. Mohr, W. Hondius Boldingh, and J. Althoff.</td>
</tr>
<tr>
<td>1129</td>
<td>RNA Tumor Virus gs Antigen and Tumor Induction by Various Doses of 3-Methylcholanthrene in Various Strains of Mice Treated as Weanlings.</td>
<td>Carrie E. Whitmire and Ronald A. Salerno.</td>
</tr>
<tr>
<td>1133</td>
<td>Chromosome Breakage by 1-Methyl-2-benzylhydrazine in Mouse Cancer Cells.</td>
<td>Eva Therman.</td>
</tr>
<tr>
<td>1137</td>
<td>Inhibition of DNA and RNA Metabolism by Daunorubicin and Adriamycin in L1210 Mouse Leukemia.</td>
<td>W. Delano Meriwether and Nicholas R. Bachur.</td>
</tr>
<tr>
<td>1154</td>
<td>Herpesviruses in Tumors of Postspawning Rana pipiens.</td>
<td>Robert Gilmore McKinell and Virginia L. Ellis.</td>
</tr>
<tr>
<td>1160</td>
<td>Depression of Thymidylate Synthetase Activity in Response to Cytosine Arabinoside.</td>
<td>DeWayne Roberts and Ellen V. Loehr.</td>
</tr>
</tbody>
</table>
1267 Relapse Patterns in Burkitt’s Lymphoma.
1257 Isolezyme Patterns of Branched-Chain Amino Acid Transaminase in Various Rat Hepatomas.
1264 Phytoestrogens in Normal and Tumor-bearing Rats.
1267 Relapse Patterns in Burkitt’s Lymphoma.
1273 Genetic Characterization of Diethylnitrosamine-induced Purple Adenine (ad-3) Mutants in Neurospora crassa.
1278 A Phase II Study of 1-(2-Chloroethyl)-3-cyclohexyl-1-nitrosourea (NSC 9037) in the Palliative Management of Advanced Gastrointestinal Cancer.
1280 Sequential 1-(2-Chloroethyl)-3-cyclohexyl-1-nitrosourea (NSC 79037) and 5-Fluorouracil (NSC 19893) Therapy of Gastrointestinal Cancer.
1283 Effect of Allopurinol on the Pharmacokinetics of 6-Mercaptopurine (NSC 755) in Cancer Patients.
1290 Aldolase C in Cultured Mouse Glioblastoma Cells.
1293 Studies on the Cytotoxicity of Bleomycin in the Small Intestine of the Mouse.
1301 Ribonucleotide Reductase and DNA Synthesis in Ehrlich Ascites Tumor Cells
1307 Inhibition of D N A and RNA Synthesis by Daunorubicin in Sensitive and Resistant Ehrlich Ascites Tumor Cells in Vitro.
1315 Tissue-specific Effects of N4-(Δ1-Isopentenyl)-adenosine on the Incorporation of Precursors into Nucleic Acids and Protein in Rats and Mice.
1321 A Two-Stage Therapeutic Design in the Spontaneous AKR Lymphoma System.
1329 The Role of Aryl Hydrocarbon Hydroxylase in 7,12-Dimethylbenz(a)anthracene Skin Tumorigenesis: On the Mechanism of 7,8-Benzoflavone Inhibition of Tumorigenesis.
1340 Morphological Studies on Herpesvirus sylvilagus in Rabbit Kidney Cell Cultures.
1354 Obituary: Clarence Cook Little. Walter E. Heston.
1357 Announcements.

COVER LEGEND

Signal contributions to cancer research and prevention of cancer have been made by epidemiologists and statisticians. Eminent among them have been two British colleagues, Austin Bradford Hill and Richard Doll. They collaborated in the pioneer studies on the relationship of smoking to lung cancer (Smoking and Carcinoma of the Lung, Brit. Med. J., 2: 739, 1950; The Mortality of Doctors in Relation to their Smoking Habits, Brit. Med. J., 1: 1451, 1954), which, with the retrospective study of Wynder and Graham and the prospective studies of Hammond and Horn and of Doll in the United States, established the carcinogenic and other health hazards of tobacco smoking. It is noteworthy that the findings of all three studies were remarkably similar, presenting no conflicting evidence. The most important findings were that the total death rate from all causes combined is far higher among cigarette smokers than among pipe and cigar smokers and among nonsmokers, that the death rate increases in direct relation to the amount of cigarette smoking, and that the incidence of carcinoma of the lung would be reduced by 80 or 90% in the absence of smoking. Subsequent studies by Hill and Doll (The Study of Aetiology of Carcinoma of the Lung, Brit. Med. J., 2: 1271, 1952; Mortality in Relation to Smoking: Observations on British Doctors, Brit. Med. J., 2: 1071, 1956, and 1: 1399, 1964) revealed that the agent in tobacco smoke might act as a cocarcinogen in the presence of another element in the environment, provided some additional evidence that lung carcinoma is more common in urban areas than in rural areas, that the greater mortality in cigarette smokers over pipe smokers is a function of method of smoking irrespective of amount, and that deaths from cancer in sites other than the lung and upper respiratory and digestive tracts reveal little association between mortality and smoking.

Sir Austin Bradford Hill (b. 1897, London) is Emeritus Professor of Medical Statistics at the University of London and currently a member of the British Committee on the Safety of Medicines and a member of the International Statistical Institute. He has written many papers on clinical trials of drugs, smoking and lung cancer, and experimental methods in preventative medicine, which are included in his book Statistical Methods in Clinical and Preventive Medicine (E & S Livingstone, Edinburgh, 1963). In his Principles of Medical Statistics, first published in 1943 (The Lancet, London, 9th edition, 1971), he explains how investigations into forms of treatment can be planned and how figures derived from them can be analyzed in order to yield fruitful results.

William Richard Doll (b. 1912, London) has since 1969 held the position of Regius Professor of Medicine at the University of Oxford. Since 1936 he has written various articles on the etiology of cancer, many of which are summarized in his brilliant Carling Lectures, Prevention of Cancer, Pointers from Epidemiology (Nuffield Provincial Hospital Trust, London, 1967). In this book he indicates ways in which epidemiological studies can contribute to the prevention of cancer, the most intensively used method being that of correlating differences in cancer incidence in various communities with differences in the prevalence of a potential etiological factor.

We are indebted to Barratt's Photo Press, Ltd., London, England, for the portrait of Doll and permission to reproduce it, and to Hill for the portrait of himself. Doll appears at lower right; Hill, upper left.
Cancer Research


32 (6)


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