Contents

Asterisks preceding the title refer to studies in humans.

Wallace P. Rowe.

3069 Test for Carcinogenicity of Food Additives and Chemotherapeutic Agents by the Pulmonary Tumor Response in Strain A Mice. 

3086 Changes in the Deoxyribonucleoside Triphosphate Pools of Mouse 5178Y Lymphoma Cells following Exposure to Methotrexate or 5-Fluorouracil. 
M. H. N. Tattersall and K. R. Harrap.

3091 The Effect of cis-Diaminedichloroplatinum(II) on Cultured Human Lymphoma Cells and Its Therapeutic Implications. 
B. Drewinko, B. W. Brown, and J. A. Gottlieb.

3096 Immunological Studies of Runtting Syndrome in Rats Inoculated with Friend Virus. 
Noritoshi Takeichi, Noboru Kuzumaki, and Hiroshi Kobayashi.

3103 Interactions of Phorbol Esters with Cellular Membranes in Vitro. 

3108 Histochemical Studies on Nuclease Activity and Neoplastic Transformation in Rat Liver during Diethylnitrosamine Carcinogenesis. 
B. Fontanière and R. Daoust.

3112 Inhibition of Macromolecular Biosynthesis in Cultured L1210 Mouse Leukemia Cells by Thalidomine (NSC 68075). 
Larry M. Allen and Patrick J. Creaven.

3117 Comparative Metabolism of 7,12-Dimethylbenz(a)anthracene in Liver and Mammary Tissue. 

3123 Effects of a New Antitumor Agent, Epipodophyllotoxin, on Growth and Chromosomes in Human Hematopoietic Cell Lines. 
C. C. Huang, Yu Hou, and J. J. Wang.

3130 Enhancement of Skin Tumorigenesis by a Single Application of Croton Oil before or Soon after Initiation by Urethan. 
Henry Hennings, Delores Michael, and Elroy Patterson.

3135 Metastasis in a Transplantable Mammary-Trophic Pituitary Tumor. 
Peter A. Nickerson, Agostino Molteni, and Iwao Nakayama.

3139 Nonfibroblastic Origin of Foreign Body Sarcomas Implicated by Histological and Electron Microscopic Studies. 

3155 Nodular Formations in the Rat Small Intestine after Local Abdominal X-irradiation. 
Susumu Tsubouchi and Taiju Matsuawa.

3159 Preliminary Electron Microscope Study on Virus-like Particles in a Spontaneous Mammary Tumor of Collared Lemming. 
Shunkichi Hiraki, Rollo W. Van Pelt, and Leon Dmochowski.

3165 Transfer of Tumor-specific Delayed Hypersensitivity in Vitro to Normal Guinea Pig Peritoneal Exudate Cells Using RNA Extracts from Sensitized Lymphoid Tissues. 
Ronald E. Paque, Monte S. Meltzer, Berton Zbar, Herbert J. Rapp, and Sheldon Dray.

3172 Studies of Nitrogen Mustard Transport by Mouse Myeloma and Hemopoietic Precursor Cells. 
Makio Ogawa, Daniel E. Bergsagel, and E. A. McCulloch.

3176 Modification of Surface Topography of Lymphocytes by L-Asparaginase. 
Isaiah J. Fidler, Paul C. Montgomery, and Jean Pierre Cesarini.

Robert C. Buck.

3189 Regeneration of Liver in Rats in the Absence of Portal Splanchnic Organs and a Portal Blood Supply. 
Nancy L. R. Bucher and Miriam N. Swaffield.

3195 Experimental Studies Bearing on the Question of Retrograde Spread of Hodgkin's Disease via the Thoracic Duct. 
Allan E. Dumont and Amalia B. Martelli.

3203 Mechanism of Blocking by Hyperimmune Serum of Lymphocyte-mediated Cytolysis of Allogeneic Tumor Cells. 
3209 Strand Breakage in Rat Liver DNA and Its Repair following Administration of Cyclic Nitrosamines. 
Bernard W. Stewart and Emmanuel Farber.

3216 * Surface Particles on Leukemic Lymphocytes in Humans. 
H. K. Narang.

3222 A Growth-stimulating Factor from Solid Mouse Mammary Tumors.
B. K. Nair and K. B. DeOme.

3227 Effect of Arginine on the Incorporation of $^{32}$P into Rat Liver and Novikoff Hepatoma Cytosol Proteins. 
J. Pinard, G. de Lamirande, and M. Dupras.

3231 Establishment and Characterization of a Cloned Line of C3H Mouse Embryo Cells Sensitive to Postconfluence Inhibition of Division. 
Catherine A. Reznikoff, David W. Brankow, and Charles Heidelberger.

3239 Quantitative and Qualitative Studies of Chemical Transformation of Cloned C3H Mouse Embryo Cells Sensitive to Postconfluence Inhibition of Cell Division. 
Catherine A. Reznikoff, John S. Bertram, David W. Brankow, and Charles Heidelberger.

3250 Chromosomal Banding Patterns and in Vitro Transformation of Syrian Hamster Cells. 

3259 Distribution of Chromosome Constitutive Heterochromatin of Syrian Hamster Cells Transformed by Chemical Carcinogens. 
J. A. DiPaolo and N. C. Popescu.

3265 A Study of the Macromolecular Binding of $^{67}$Ga in Normal and Malignant Animal Tissues. 
Raymond L. Hayes and James E. Carlton.

3273 Cyclic Adenosine 3',5'-Monophosphate and Cell Volume. 

3278 * Combination Therapy in 130 Patients with Acute Lymphoblastic Leukemia (Protocol 06 LA 66-Paris). 

3285 Establishment and Characterization of a Transplantable Dibutylnitrosamine-induced Mouse Bladder Tumor Line FCB. 
Antonia Flaks and Bojan Flaks.

3293 Enhancement of Lymphoma Cell Immunogenicity by Infection with Nononcogenic Virus. 

3299 * Immunohistological Localization of Carcinoembryonic Antigen and Nonspecific Cross-reacting Antigen in Gastrointestinal Normal and Tumoral Tissues. 
P. Burtin, S. von Kleist, M. C. Sabine, and M. King.

3306 "Flat" Morphology Induced in Cultured Transformed Cells by Polyphloroglucin Phosphate. 
Hans Peter Schnebli and Marianne Burger.

3310 Host Age Dependency of Regression of Rous Sarcomas of Chickens. 

3312 Similarity of Ribosomal and Ribosomal Precursor RNA's from Rat Liver and the Novikoff Ascites Hepatoma. 
Thomas O. Sitz, Ross N. Nazar, William H. Spohn, and Harris Busch.

3319 Oncogenic Purine $\mathbf{N}$-Oxide Derivatives as Substrates for Sulfotransferase. 
Jerome J. McDonald, Gerhard Stohrer, and George Bosworth Brown.

3324 High- and Low-Tumorigenic Culture Lines of Rat Uterine Adenocarcinoma and Their Isozyme Patterns of Lactate Dehydrogenase and Hexokinase. 
Souei Sekiya, Yoshihiro Kikuchi, and Hiroyoshi Takamizawa.

3330 Characterization of Primary Hepatocellular Carcinomas and Initial Transplant Generations. 

3340 Obituary: Leonid F. Larionov. 
N. Blokhin.

3342 Announcements.

3343 Acknowledgment to Reviewers.

3346 Index to Volume 33.


Cover Illustrations for 1973.