Contents

Asterisks preceding the title refer to studies in humans.


458 Spectrophotometric Analysis of Cytochromes in Rat Liver during Carcinogenesis. Yoshihiko Oyanagui, Nobuhiro Sato, and Bunji Hagihara.


468 Lack of Syncytium Formation by a Type C Virus-producing XC Cell Line in the Mixed Culture Cytopathogenicity Test. James C. Chan, Nora Vera, James L. East, Shunkichi Hiraki, and Leon Dmochowski.

474 An Electron Microscopic Study of Spontaneous and Experimentally Induced Leukemia in ICRC Mice. Shunkichi Hiraki, Kumal J. Ranadive, and Leon Dmochowski.


491 Immune Stimulation-Inhibition of Experimental Cancer Metastasis. Isidur J. Fidler.

499 Enhanced Regression of DMBA-induced Mammary Cancers in Rats by Combination of Ergocornine with Ovariectomy or High Doses of Estrogen. S. K. Quadri, G. S. Kledzik, and Joseph Mettes.


516 Transcription of Nonrepetitive DNA in Human Tissues. Hirohoshi Sawada and Grady F. Saunders.


543 Breakdown of Friend Virus-induced Tolerance and Development of Running Syndrome in Rats. Noritoshi Takeichi, Hiroshi Kaji, Takao Kodama, and Hiroshi Kobayashi.

551 Biochemical Differentiation of a Murine Neuroblastoma in Vitro and in Vivo. B. Winfred Ruffner, Jr., and Dorothee M. Grieshaber.


564 Vitamin A Compounds and Analogs as Inhibitors of Mixed-Function Oxidases That Metabolize Carcinogenic Polycyclic Hydrocarbons and Other Compounds. Donald L. Hill and Tzu-Wen Shih.


576 7,12-Dimethylbenz(a)anthracene Retention in the Rat Submandibular Gland following Intraglandular Injection. John A. Schmutz, Alexander C. Brownie, and Anand P. Chaudhry.

581 Inhibition of Ribosomal RNA Maturation in Novikoff Hepatoma Cells by Toyocamycin, Tubercidin, and 6-Thioguanosine. John W. Weiss and Henry C. Pitot.

588 Effect of Aminonucleoside on Serum Stimulation of Nonhistone Nuclear Protein and DNA
Synthesis in Normal and SV40-transformed Human Fibroblasts.

**Jolanta J. Cholon and George P. Studzinski.**

Low- and High-Voltage Electron Microscopy of a Human Neuroblastoma in Long-Term Organ Culture.

**Katherine M. Lyser.**

Studies on a Cell Line Derived from the L1210 Murine Leukemia with Altered Surface Properties and Decreased Capacity for Tumor Production.

**David Kessel and H. Bruce Bosmann.**

Effect of a Carcinogenic Oral Dose of 7,12-Dimethylbenz(a)anthracene on Receptor Binding of Estradiol-17β in Uterus and Mammary Tissue throughout Lactation in the Rat.

**David D. Keightley and Allan B. Okey.**

Corynebacterium granulosum-induced Protection against Artificial Pulmonary Metastases of a Syngeneic Fibrosarcoma in Mice.

**Luka Milas, Nancy Hunter, and H. Rodney Withers.**

Gluocorticoid Receptors and Mechanism of Resistance in the Cortisol-sensitive and -resistant Lines of Lymphosarcoma P1798.

**N. Kaiser, R. J. Milholland, and F. Rosen.**

Imbalance in Ornithine Metabolism in Hepatomas of Different Growth Rates as Expressed in Behavior of L-Ornithine:2-oxoacid Aminotransferase (Ornithine Transaminase, EC 2.6.1.13).

**Ikuko Tomino, Nobuhiko Katunuma, Harold P. Morris, and George Weber.**

Identity of the Paramagnetic Element Found in Increased Concentrations in Plasma of Cancer Patients and Its Relationship to Other Pathological Processes.

**Colin Mailer, Harold M. Swartz, M. Konteczny, Sunandini Ambegaonkar, and Vernon L. Moore.**

Transfer RNA Base Composition Studies in Morris Hepatomas and Rat Liver.

**Erika Randerath, Li-Li S. Y. Chia, Harold P. Morris, and Kurt Randerath.**

Brief Communication:

**HL-A Antigens on Hyperplastic and Neoplastic Thymic Tissue.**

**Naramarz Naeim, Andrew Stoddard, Dieter Fritze, Christian Herrmann, Edith Zeller, and Roy L. Walford.**

Obituary: Sidney Farber, M.D.

**George E. Foley.**

Announcements.

**Erratum.**

---

**COVER LEGEND**

Enzootic hematuria of cattle occurs in most countries of the world. The map (pictured) indicates its distribution in Turkey. The disease is usually confined to small, well-defined areas and occurs in cattle raised in mountainous, wooded wastelands. A. M. Pamukcu (Zentr. Veterinarmed., 4: 185-197, 1957) demonstrated that the serious problem of enzootic hematuria in cattle and water buffalo along the Black Sea was a manifestation of carcinoma of the urinary bladder. Initial epidemiological studies convinced Pamukcu that an environmental factor was involved, it being the common fern of the mountain forests (Pteris aquilina). Collaborative investigations between Dr. Pamukcu and Dr. J. M. Price extended the field studies in Turkey. Cattle from non-disease areas (e.g., Ankara) were fed bracken fern from farms where the problem existed (in the mountains near Bolu). Bladder cancer was induced in virtually all cattle that survived for more than 3 years on a feeding regimen patterned after field observations. The induced bladder cancers were indistinguishable from the disease seen under natural conditions (cf. Cancer Res., 27: 917-924, 1967 and 28: 2247-2251, 1968).


A. M. Pamukcu (left) was born in 1912 in Diyarbakir, Turkey. He received a D.V.M. degree from the University of Ankara, Turkey, in 1938, and a Ph.D. in Animal Pathology from Michigan State University, East Lansing, in 1948. In 1957 he became Professor at the University of Ankara and in 1959 was made Chairman of the Department of Pathology, Faculty of Veterinary Medicine, at the University.

James M. Price (right) was born in 1921 in Onalaska, Wisconsin. He received a master's degree in biochemistry, a Ph.D. in physiology, and an M.D. degree, all from the University of Wisconsin. He was appointed Assistant Professor of Clinical Pathology at Wisconsin. Later he became Associate Professor of Surgery in Cancer Research, Professor of Surgery in Cancer Research, and in 1963 Professor of Clinical Oncology. In 1957 he obtained the first American Cancer Society-sponsored Lifetime Professorship in Cancer Research and in 1967 joined Abbott Laboratories as Director of Experimental Therapy. Currently, he is Vice President of Corporate Research and Experimental Therapy.

The map of the bovine enzootic hematuria region in Turkey is from Dr. Pamukcu (Ann. N. Y. Acad. Sci., 108: 938, 1963). The illustrations of bracken fern and of a typical wooded mountainous area of endemic disease occurrence in cattle were furnished by Dr. Price.