Contents

883 Mammary Neoplastic Response of Lewis and Sprague-Dawley Female Rats to 7,12-Dimethylbenz(a)anthracene or X-ray.
Claire J. Shellabarger.

886 Increased Activity of Polynucleotide Ligase from Rat Hepatoma Induced by N-2-Fluorenylacetamide.
Kinji Tsukada, Shigeru Hokari, Nobuko Hayasaki, and Nobuyuki Ito.

889 The Effect of Polynosinic-Polyctydylc Acid on the Immune Response of Mice to Antigenically Distinct Tumors.
Jack C. Fisher, Sidney R. Cooperband, and John A. Mannick.

893 Carcinogenesis and Alkylation of Rat Liver Nucleic Acids by Nitrosomethylurea and Nitrosourea Administered by Intraportal Injection.

898 The Immunogenic Activity of Tumor Antigens Retained by the Reticuloendothelial Cells of Tumor-bearing Mice.
Jan Vaage.

904 Combined Chemoimmunostimulation Therapy against Murine Leukemia.

908 Malignant Tumors in Rats Given Lasiocarpine.
Donald J. Svoboda and Janardan K. Reddy.

914 Plasma Protein Synthesis by N-2-Fluorenylacetamide-induced Primary Hepatocellular Carcinomas and Hepatic Nodules.
Frederick F. Becker, Kenneth M. Klein, and Richard Asafsky.

921 Unexpected Toxicity in Patients Treated with Iphosphamide.
Jacobus J. van Dyk, Hendre C. Falkson, Alma M. van der Merwe, and Geoffrey Falkson.

925 Studies on Nucleoli and Cytoplasmic Fibrillar Bodies of Human Hepatocellular Carcinomas.
Karel Smetana, Ferenc Gyorkey, Phyllis Gyorkey, and Harris Busch.

933 Neutron-induced Mammary Neoplasms in the Rat.
Howard H. Vogel, Jr., and Robert Zaldivar.

939 Characteristics of Cell Proliferation in Acute Leukemia.

943 Polyribosome Disaggregation in Rat Liver following Administration of the Phytotoxic Proteins, Abrin and Ricin.
Jung-Yaw Lin, Chia-Chu Pao, Shyr-Te Ju, and Ta-Cheng Tung.

948 Microdoser Studies on the Respiration of Burkitt Lymphoma Cells (EB-3).
J. D. Lutton and M. J. Kopac.

952 Binding of Chemical Carcinogens to Nuclear Proteins of Rat Liver.
Richard A. Jungmann and John S. Schweppe.

960 Further Definition by Cytotoxicity Tests of Cell Surface Antigens of Human Sarcomas in Culture.
Eda T. Bloom.

968 Feeding Response to Change in Absorbable Food Fraction during Growth of Walker 256 Carcinosarcoma.
S. D. Morrison.

973 Effect of Enzyme Induction on the Metabolism of Benzo(a)pyrene and 3'-Monomethylaminoazobenzene in the Pregnant and Fetal Rat.

979 Synthesis of a-Fetoprotein by Liver, Yolk Sac, and Gastrointestinal Tract of the Human Conceptus.
David Gitlin, Anita Perricelli, and Geraldine M. Gitlin.

983 Anastomotic Sarcoma of Irradiated Parabiont Rats.
S. Warren, E. E. Hurst, Jr., C. E. Brown, and R. N. Chute.

988 Lymphocyte Blastogenic Responses to Cultured Tumor Cells in Vitro.
Ralph J. Anderson, Charles M. McBride, and Evan M. Hersh.

993 Collagenolytic Enzymes in Human Neoplasms.
Marc H. Dresden, Stephen A. Heilman, and Jimmy D. Schmidt.
Johannes Müller (1801—1858), one of the fountainheads of modern medicine, was born in Coblenz, Germany. He received his M.D. from the University of Bonn in 1822 and practiced as a physician for only a short period before pursuing an academic career. He was professor of pathology, physiology, and comparative anatomy at the University of Berlin until his retirement.

In Müller’s early work, he recognized the similarity between cells previously observed in plants and those which he observed in animals (Vergleichendes Anatomie der Myxinoiden, Berlin, 1835), thus introducing into biology the cell theory heretofore applied to botany. He is shown on the cover in an 1858 photograph which was kindly supplied by Dr. Peter Olch, National Library of Medicine, Bethesda, Maryland. The cancer cells are sketched after Figs. 6 and 7 of Müller’s famous 1838 work which contains the first reproduction of cancer cells. The original figures are supplied through the courtesy of the New York Academy of Medicine Library.

His greatest contribution is that in which he demonstrated the harmony between the pathological and the embryonic development of tumors (Über den feineren Bau und die Formen der Krankhaften Geschwülste. Berlin: G. Reimar, 1838). Among Müller’s followers were Brücke, Du Bois Reymond, Helmholtz, Kölliker, Henle, and especially Schwann, who at Müller’s suggestion started his classic work on the cellular character of animal tissues, and Virchow, the father of cellular pathology, who was one of his students. Virchow wrote of his teacher’s influence, “... he (Müller) was the first to give the cell concept a broad application to pathology in that he directed it upon the study of tumors.... We younger men early learned to think in terms of cellularity.” (R. Virchow, Virchow Arch. Pathol. Anat., 87: 389, 1882, from Hans G. Schlimumberger, Origins of the Cell Concept in Pathology, Arch. Pathol., 37: 396-407, 1944).

Müller founded the Archiv für Anatomie, Physiologie, und Wissenschaftliche Medicin, later known as Müller’s Archiv, in 1934. He received the Copley Medal of the Royal Society of London.

He is shown on the cover in an 1858 photograph which was kindly supplied by Dr. Peter Olch, National Library of Medicine, Bethesda, Maryland. The cancer cells are sketched after Figs. 6 and 7 of Müller’s famous 1838 work which contains the first reproduction of cancer cells. The original figures are supplied through the courtesy of the New York Academy of Medicine Library.

Strongly built, with broad shoulders, and a massive Achillean head, Müller was a striking, magnetic, impressive teacher of rare personal charm. [Details are from F. H. Garrison. An Introduction to the History of Medicine. Ed. 4 (reprinted), pp. 451—453. Philadelphia: W. B. Saunders Co., 1929.]

Among Müller’s followers were Brücke, Du Bois Reymond, Helmholtz, Kölliker, Henle, and especially Schwann, who at Müller’s suggestion started his classic work on the cellular character of animal tissues, and Virchow, the father of cellular pathology, who was one of his students. Virchow wrote of his teacher’s influence, “... he (Müller) was the first to give the cell concept a broad application to pathology in that he directed it upon the study of tumors.... We younger men early learned to think in terms of cellularity.” (R. Virchow, Virchow Arch. Pathol. Anat., 87: 389, 1882, from Hans G. Schlimumberger, Origins of the Cell Concept in Pathology, Arch. Pathol., 37: 396—407, 1944).

Müller founded the Archiv für Anatomie, Physiologie, und Wissenschaftliche Medicin, later known as Müller’s Archiv, in 1934. He received the Copley Medal of the Royal Society of London.

He is shown on the cover in an 1858 photograph which was kindly supplied by Dr. Peter Olch, National Library of Medicine, Bethesda, Maryland. The cancer cells are sketched after Figs. 6 and 7 of Müller’s famous 1838 work which contains the first reproduction of cancer cells. The original figures are supplied through the courtesy of the New York Academy of Medicine Library.