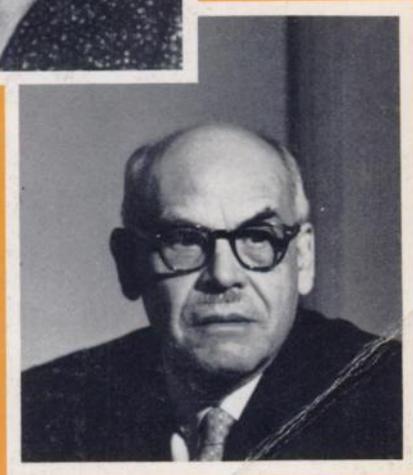
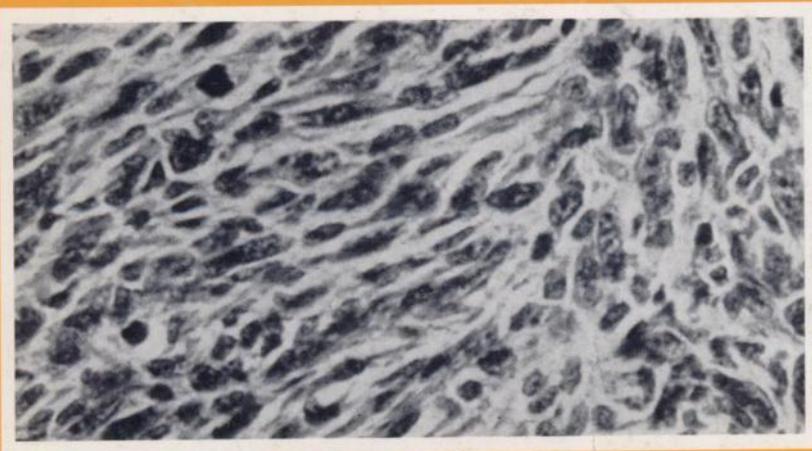
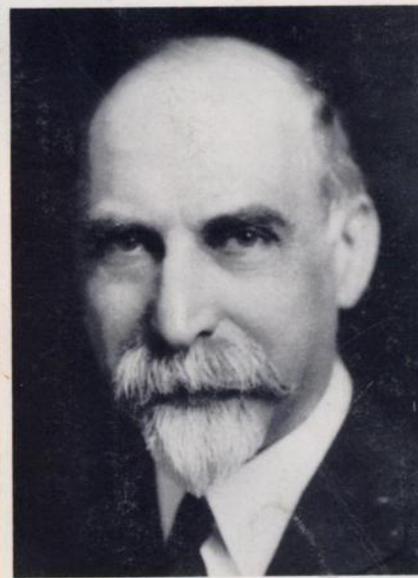


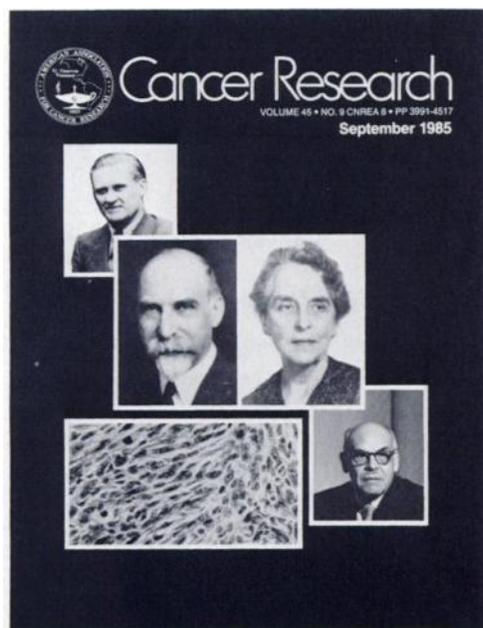
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COVER LEGEND



Serendipitous observations led to the discovery that substances with smooth surfaces in contact with subcutaneous tissues of rodents produced sarcomas from nearby cells after long latent periods. Floyd C. Turner (1889–1960) of the National Cancer Institute, United States Public Health Service, first noted (*J. Natl. Cancer Inst.*, 2: 81, 1941) that smooth discs of bakelite implanted in the subcutaneous tissue of rats had this property. Subsequently Bernard S. Oppenheimer (1876–1958) and Enid T. Oppenheimer (1885–1966) at the Institute of Cancer Research, Columbia University, New York (*Proc. Soc. Exp. Biol. Med.*, 67: 33, 1948), also accidentally found that cellophane films produced similar tumors. The Oppenheimers and many other

investigators including Alexander and Horning, Druckrey and Schmähl, Goldhaber, Kogan, Nothdurft, and Zollinger greatly extended these observations and found that the activity was independent of the chemical constitution of the smooth surfaces; *i.e.*, plastics, glasses, and metals with smooth surfaces all had activity. Similarly Fritz E. Bischoff (1899–) at the Santa Barbara Cottage Hospital Research Institute, Santa Barbara, California (*Prog. Exp. Tumor Res.*, 3: 412, 1963), early found that the carcinogenicity of cholesterol injected subcutaneously in oil solution depended on the smooth surfaces of cholesterol crystals deposited from supersaturated solutions of this compound. Many authors found that smooth surfaces lost their carcinogenicity when roughened, when many holes were introduced, or when they were powdered.

The phenomenon has been described variously as smooth surface, solid state, and foreign body carcinogenesis. Reviews of this subject include those by Bischoff and Bryson (*Prog. Exp. Tumor Res.*, 5: 85, 1964) and Brand (*In: Cancer*, F. F. Becker (ed.), Vol. 1, Ed. 2, p. 661. New York: Plenum Publishing Corp., 1982). No satisfactory cellular or molecular explanation of these singular findings has been advanced.

The figure (Fig. 3a, Oppenheimer et al., *Cancer Res.*, 15: 333, 1955) shows tumor cells of a fibrosarcoma induced by cellophane in a rat.

The portrait of Turner (*left*) is from *J. Natl. Cancer Inst.*, 59: 566, 1977. The portraits of B. S. Oppenheimer and E. T. Oppenheimer (*center*) were kindly provided by Betty Rose Moore from the Columbiana Collection of Columbia University, New York, and by Margaret Willhite, Teaneck, New Jersey, respectively. The portrait of Bischoff (*right*) was by favor of Dr. Bischoff. We are indebted to Dr. James A. Miller for the information and preparation of the material.

M. B. S.