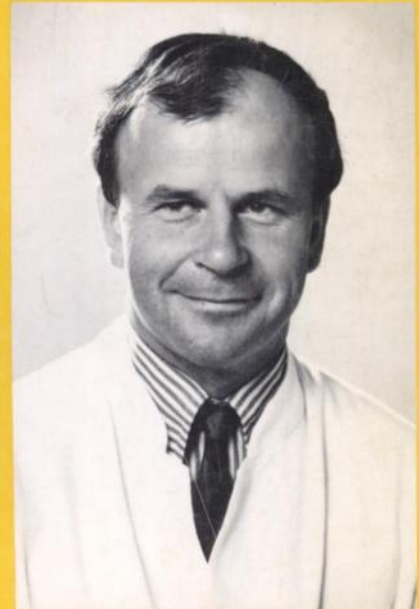
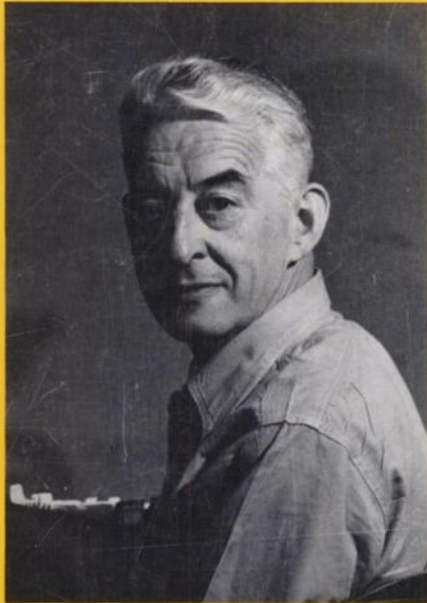


# Cancer Research

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PART 1 OF TWO PARTS





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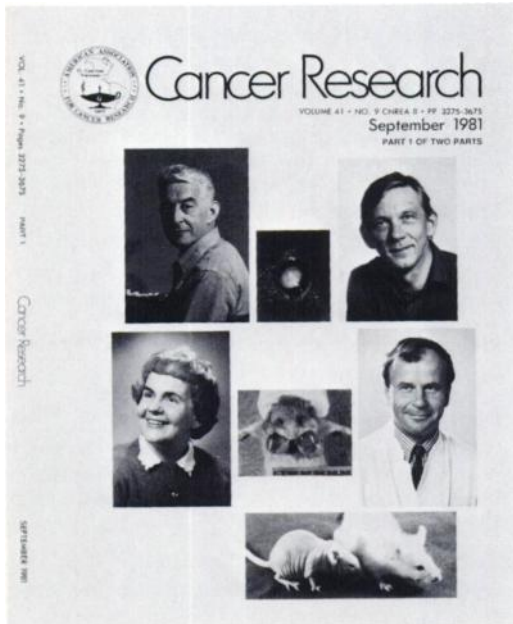
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# COVER LEGEND

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Transplanted tumors in rodents, introduced at the turn of the twentieth century, were the first laboratory material for cancer research. Such tumors were transplantable only between animals of the same species, and success was related to the genetic similarity between the donor and the recipient of the graft.

The growth of tumors in flasks containing nutrient media, as cell culture, was achieved by A. Carrel and M. T. Burrows in 1911 (*J. Exp. Med.*, 13: 387–396, 571–575, 1911). James B. Murphy soon thereafter obtained tumor growth on embryonated fowl eggs (*J. Am. Med. Assoc.*, 59: 874–875, 1912). However, no successes were reported in transplantation between animals of different species.

Heterologous transplantations between species returned as a field of interest by the use of immune-protected sites or in immune-suppressed animals.

Harry S. N. Greene (*upper left*) (1904–1969), professor of pathology at the Yale University School of

Medicine, New Haven, Connecticut, during 1939 to 1950 transplanted over 120 human tumors into the anterior chamber of the eye of rabbits or guinea pigs. He related the successful growth of such transplants to the fate of the patients. Successful growth was related to rapidly fatal disease, and lack of growth indicated a more favorable outcome. The growth data were not predictable from the histomorphology of the tumors [*Cancer (Phila.)*, 5: 24–44, 1952].

Helene W. Toolan (*lower left*) (*b.* 1912), working at the Sloan-Kettering Institute in New York City, in 1954 reported that successful and progressive growth of some human cancers could be achieved in rats and in hamsters that had been treated with cortisone or with total-body radiation (*Cancer Res.*, 14: 660–666, 1954). This provided biochemists and other workers with viable human tumor material.

Jorgen Rygaard (*upper right*) (*b.* 1914) and Carl O. Povlsen (*lower right*) (*b.* 1940), of Denmark in 1969 introduced heterotransplantation of tumors into athymic “nude” mice (*Acta Pathol. Microbiol. Scand.*, 77: 758–760, 1969). This useful, simple experimental procedure made available human tumor material for a wide variety of approaches in cancer research. A symposium on the use of nude mice in cancer research summarizes some of such uses [D. P. Houchens and A. A. Ovejera (eds.), *Proceedings of a Symposium on the Use of Athymic (Nude) Mice in Cancer Research*. New York: Gustav Fischer, 1978].

We are indebted to Drs. Toolan, Rygaard, and Povlsen for their portraits and the illustrations. The portrait of Dr. Greene is through the courtesy of the Yale University School of Medicine. Pictured are a tumor growing in the anterior chamber of an eye of a guinea pig [from *Cancer (Phila.)*, 5: 24, 1952], a human carcinoma 14 days after transplantation into a hamster cheek pouch in an animal given cortisone, and a nude mouse of BALB/c background with a normal littermate.

M.B.S.