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"for his discoveries concerning hormonal treatment of prostatic cancer"

ノ賞状

1966年度の Physiology or Medicine  
ノ Nobel 賞を授けられた

Prof. Charles Brenton Huggins,  
Ben May Laboratory for Cancer Research,  
University of Chicago, Chicago, Ill., U.S.A.  
ノ 略 (107~8頁) ヲ

1966年12月13日 Stockholm に行つた Nobel  
Lecture (172-180頁) 也。

前立腺癌のホルモン療法で 睾丸摘出の手術法  
を発見したのは 1942年 也。 Nobel 賞は  
1966年 也。

## CHARLES HUGGINS

Charles Brenton Huggins was born in Halifax, Nova Scotia on 22 September 1901, the elder son of Charles Edward Huggins, pharmacist, and of his wife, Bessie Maria Spencer.

Charles B. Huggins attended the public schools in Halifax; Acadia University (B. A. 1920) Wolfville, N. S.; and Harvard University (M. D. 1924) Boston, Massachusetts.

Charles B. Huggins interned at the University of Michigan Hospital (1924—26); he was Instructor in Surgery, University of Michigan 1926—27. Since 1927 he has been a member of the Faculty of University of Chicago: Instructor in Surgery 1927—29; Assistant Professor 1929—33; Associate Professor 1933—36; Professor of Surgery 1936—62; Director, Ben May Laboratory for Cancer Research 1951—; and William B. Ogden Distinguished Service Professor 1962—.

Charles Huggins was married to Margaret Wellman on 29 July 1927. They have a son, Charles E. Huggins and a daughter, Emily Wellman Huggins Fine.

### *Honorary Degrees*

M. Sc., Yale University, 1947. D. Sc., Acadia University 1946; Washington University, 1951; Leeds University, 1953; Torino, 1957. LL. D., Aberdeen University, 1966. Fellow Royal College of Surgeons, Edinburgh, 1958; Fellow Royal College of Surgeons (hon.) 1959; Fellow American College of Surgeons (hon.) 1963.

### *Awards*

Gold Medals: American Medical Association, 1936 and 1940; Société internationale d'Urologie, 1948; American Cancer Society, 1953; American Association Genito-Urinary Surgeons, 1955; Borden Award, American Association of Medical Colleges, 1955; Rudolf Virchow Society, 1964; Worshipful Society of Apothecaries, 1966; *et cetera*.

Katherine Berkan Judd Prize, 1941; Charles L. Meyer Prize, National Academy of Sciences, 1943; American Urological Society Prize, 1948; Francis Amory Prize, American Academy of Arts and Sciences, 1948; Comfort Crookshank Prize, Middlesex Hospital, London, 1957; Charles



Mickle Fellowship, Toronto University, 1958; Cameron Prize, Edinburgh University, 1958; Valentine Prize, New York Academy of Medicine, 1962; Hunter Award, American Therapeutic Society, 1962; Lasker Prize, 1963; Laurea, University Bologna, 1964; Passano Award, 1965; Guiteras Award, 1966; Gairdner Award, 1966; *et cetera*.

Order pour le Mérite, 1958; Order "El Sol del Peru", 1962.

Member of the National Academy of Sciences; American Philosophical Society; *et cetera*.

The natural course can be utterly different in various sorts of malignant disease. Some tumors grow without any apparent restraint whatever. When man harbors a neoplasm of this kind, an increase in the size of the tumor is readily evident from day to day and death supervenes soon thereafter. Conversely, some malignant growths disappear spontaneously. Both of these paradoxical effects are now clearly associated with cancer. Some 10-15% of human tumors after the neoplasm has been removed, and a small fraction of the population of growths of the human tumor take place in patients who are cured of the disease.

The natural history of some of a cancer is a factor in the prognosis of the tumor and its control. Control of cancer which is a highly complex and one complicated all with his tumor. There are multiple factors which influence cancer: chromosomal, hereditary, immunologic, the genotype and others. Prominent among them is the molecular status, both of tumor and host — the subject of this discussion.

In hormone-responsive cancers, appropriate endocrine modification results in characteristic effects on tumors of several kinds (Table 1) in man and animals, even in those in the advanced stages of the disease. In cancer, there is a great deal of improvement in the host's condition. The results are often spectacular. The benefit can be evident within a few hours after the administration. The improvement can persist throughout the remainder of the life of the organism; in some regressions lasting more than a decade are not uncommon. There can be complete disappearance of the tumor. But worthwhile benefit occurs only when all or much of the tumor is hormone-responsive.

Table 1. Eight hormone-responsive cancers of man and animals

Type of cancer	Species
Carcinoma of breast	Human female (17), male (18), Rat (34)
Carcinoma of prostate	Human (17)
Carcinoma of thyroid	Human (35)
Lymphosarcoma, leukemia	Mouse (41), Human (36)
Carcinoma of kidney	Hamster (42), Human (34)
Carcinoma of endometrium	Human (34)
Carcinoma of parathyroid	Human (36)
Carcinoma of adrenal glands	Hamster (37), Dog (38)

# ENDOCRINE-INDUCED REGRESSION OF CANCERS

by

CHARLES HUGGINS,

Ben May Laboratory for Cancer Research, University of Chicago,  
Chicago, Ill.

Nobel Lecture, December 13, 1966

The natural course can be utterly different in various sorts of malignant disease. Some tumors grow without any apparent restraint whatever. When man harbors a neoplasm of this kind, an increase in the size of the cancer is readily evident from day to day and death ensues in, say, six weeks. Conversely, some malignant growths disappear spontaneously. Both of these antipodal effects are rare. Mostly, man with cancer lives 1 year or a little longer after the neoplasm becomes manifest, and it would appear that some inhibition of growth of the tumor takes place to produce this protracted course.

The net increment of mass of a cancer is a function of the interaction of the tumor and its soil. Self-control of cancers results from a highly advantageous competition of host with his tumor. There are multiple factors which restrain cancer — enzymatic, nutritional, immunologic, the genotype and others. Prominent among them is the endocrine status, both of tumor and host — the subjects of this discourse.

In hormone-responsive cancers, appropriate endocrine modification results in catastrophic effects on cancers of several kinds (Table 1) in man and animals, even in those in the terminal stages of the disease. Of course, there ensues *pari passu* improvement in the host's condition. The results are often spectacular. The benefit can be evident within a few hours after the intervention. The improvement can persist throughout the remainder of the life of the organism; in man regressions lasting more than a decade are not uncommon. There can be complete disappearance of the lesions. But worthwhile benefit ensues only when all or much of the cancer is hormone-respon-

Table 1. Eight hormone-responsive cancers of man and animals

Type of cancer	Species
Carcinoma of breast	Human:female (17), male (18). Rat (44)
Carcinoma of prostate	Human (12)
Carcinoma of thyroid	Human (52)
Lymphosarcoma, leukemia	Mouse (48). Human (50)
Carcinoma of kidney	Hamster (53). Human (54)
Carcinoma of endometrium	Human (55)
Carcinoma of seminal vesicle	Human (56)
Carcinoma of scent-glands	Hamster (57). Dog (58)