

History of Cancer Research: A Starter Reading List and Guide

Since 1966, CANCER RESEARCH has devoted its covers to illustrations of persons and events of historical interest to cancer investigators. The illustrated covers have been received favorably and are now in their 9th year. The covers also have stimulated interest in, and inquiries about, historical sources.

A short, selective list was made of publications that would allow a student to acquire a historical perspective of cancer research. Preference was given to analytical reviews in English, containing extensive bibliographies and citations of original sources. To this list were added indices and guides to the history of cancer, with which the prepared student could delve for further material.

The work of James Ewing (5) is an excellent starting point for any aspect of oncology. The 1st chapter of his classical *Neoplastic Diseases* takes the reader to the experimental period at the turn of this century. The panoramic view is extended to more recent times by the too-brief essays of Burrows (2) and of Ackerknecht (1).

Haagensen (9) in 1932 compiled an exhibit of 158 writings on cancer. Although only the commentary is reproduced for most items, this is a rewarding trip to a museum.

Haggard and Smith (10) wrote a reflective paper on the centenary of Johannes Müller and the subsequent histological period of cancer. The 19th century foundations of cancer research are further developed in a scholarly 2-part study by Triolo (26, 27).

Woglom (31) in 1913 reviewed the earliest period of experimental cancer research, on transplanted tumors in rodents. His monograph remains recommended reading for investigators who intend to use transplanted tumors.

Charles Oberling (19) in 1943 wrote a small book on cancer, which Woglom translated from the French in 1952. If there be any book on cancer research that deserves being called literature, the appellation belongs to *The Riddle of Cancer*.

The favorite experimental animal in cancer research is the mouse, especially of pure lineages developed by mammalian geneticists, and the favorite neoplasm is the mammary cancer that this convenient little beast develops. The sweep of research with this material is presented in a collection of papers from the National Cancer Institute (16).

The commanding figure of Otto Warburg (30) introduced rational biochemical approaches to cancer research. The biochemical area is systematically described by Greenstein (7).

The field of virus research in cancer is covered, with an ear for history, by Gross (8). The enlightenments of cancer

by epidemiological research are presented by Clemmesen (3).

Onuigbo (20, 21) has contributed valuable historical essays on several more specialized topics in cancer. Triolo and Riegel (28) used the history of the American Association for Cancer Research as a framework for recording concurrent research achievements.

Specific lines of investigations summarized by major participants include Leo Loeb's (14) paper on endocrine aspects of carcinogenesis, Kennaway's (13) account of the isolation of carcinogenic polycyclic hydrocarbons from coal tar, and Shope's (25) essay on concepts in viral oncogenesis. Some historical cancer research plans, going back to 1802, were reproduced in 1957 (23).

The Nobel Prize, the summit accolade in science since 1901, has been extended to cancer investigators on 2 occasions. Johannes Fibiger (6) was the recipient in 1926 for his work on the *Spiroptera* carcinoma in rats, which never could be satisfactorily replicated by others (24). The prize should have been divided with Yamagiwa, for his successful induction of tar cancers (11). In 1966, Peyton Rous (22) and Charles Huggins (12) shared the award, for viral oncogenesis and for hormonal control of prostatic cancer. The recognition of Rous came 55 years after his basic discovery of cell-free transmission of fowl sarcoma.

The student who has read, or at least scanned, the above leads can now proceed to more systematic searches.

The National Library of Medicine provides current listings through its *Medline* service, but this requires a fairly clear statement of the topic and goes back only to 1970. For a browsing approach, the following are useful. Oatfield (18), in a merry mood, guides the reader through the jungle of cancer and cancer-related publications. Vaillancourt (29) makes a historical topic of the bibliography of oncology.

Morton (15) provides a general historical bibliography on medicine. A bibliography of the history of medicine was initiated by the National Library of Medicine (17) in 1964. An index to the experimental cancer literature from 1900 to 1935 was provided by the Donner Foundation (4).

For contributions since 1953, *Excerpta Medica (Cancer)* is a basic bibliographic resource in cancer research, including its history.

Lastly, it should be pointed out that the *Cancer Bulletin* has featured historical cover illustrations (executed by Mr. Joseph F. Schwarting) since 1948. Dr. Fred W. Stewart, during his editorship of *Cancer*, 1948 to 1961, used the frontispiece for historical vignettes. In 1973, *CA* began to publish a series of *Classics in Oncology*. All are contributions toward the development of informed background that will speed the day when a history of the conquest of cancer can be written.

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Cancer Research

The Journal of Cancer Research (1916–1930) | The American Journal of Cancer (1931–1940)

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