

Cancer Research

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COVER LEGEND

John J. Bittner (1904–1961), late Professor of Cancer Biology at the University of Minnesota, was a member of the Jackson Memorial Laboratory (Bar Harbor, Maine) whose staff in 1933 reported an extrachromosomal influence in the etiology of breast tumors of mice (The Existence of Non-Chromosomal Influence in the Incidence of Mammary Tumors in Mice. *Science*, 78 (N.S.): 465–466, 1933). In 1934, Bittner undertook foster nursing studies, the results of which were published as a preliminary report 2 years later (Some Possible Effects of Nursing on the Mammary Gland Tumor Incidence in Mice. *Science*, 84 (N.S.): 162, 1935). Research communicated by Bittner, between 1936 and 1939, established the presence of a transmissible factor, the "milk agent" (MTA) in the etiology of these rodent neoplasms (Breast Cancer in Mice. *Am. J. Cancer*, 35: 44–50, 1939; Relation of Nursing to the Extra-Chromosomal Theory of Breast Cancer. *Am. J. Cancer*, 35: 90–97, 1939).

Remmert Korteweg (1884–1961), former Director of the Netherlands Institute for the Study of Cancer at Amsterdam, began investigations on the transmission of cancer in mice in 1933. (Proefondervindelijke onderzoekingen aangaande erfelijkheid van kanker. *Ned. Tijdschr. Geneesk.*, 78: 240–245, 1934; Onderzoek naar een eventueel verband tussen de functie van den eierstok en kanker van de borstklier bij de muis. *Ned. Tijdschr. Geneesk.*, 79: 1463–1470, 1935; On the Manner in Which the Disposition to Carcinoma of the Mammary Gland Is Inherited in Mice. *Genetica*, 18: 350–364, 1936). At this time, Korteweg favored the first of several hypotheses on extrachromosomal transmission, namely, through the cytoplasm, during intrauterine life, and by means of the mother's milk. Korteweg and his coworkers also contributed numerous data on hormonal influences in tumorigenesis (R. Korteweg and F. Thomas. Tumor Induction and Tumor Growth in Hypophysectomized Mice. *Am. J. Cancer*, 37: 36–44, 1939; P. J. von Gulik and R. Korteweg. Susceptibility to Follicular Hormone and Disposition to Mammary Cancer in Female Mice. *Am. J. Cancer*, 38: 506–515, 1940).

The portrait of Bittner, *lower right*, taken in 1933, was supplied by Dr. Leonell Strong. *Upper left*, a photo of Korteweg, date unknown, was sent through the courtesy of Dr. Otto Mühlbock.

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