TABLE 2.—AC F_1 Hybrid Mice: Controls at Nineteen Months

Sex	No.	Total Mice with Tumors		Mice with Single Tumors		Mice with Multiple Tumors	
		No.	per Cent	No.	per Cent	No.	per Cent
Female	119	[illegible]	[illegible]	[illegible]	[illegible]	4	4
Male	192	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

The tumors noted are pulmonary adenomas. Only tumors confirmed on microscopic examination are reported.

bearing pulmonary tumors at 19 months of age. Males developed pulmonary tumors in approximately 47% and females in 28%. However, in a smaller group of mice 20 months and older this ratio was reversed, and, of 43 female controls, 29 developed pulmonary tumors (67%). Of 41 male controls in this age group, 24 developed pulmonary tumors (58%).

The nature of the pulmonary tumors observed in AC F_1 mice has been a matter of considerable interest in this study, and we have not felt warranted in referring to the neoplasms observed as carcinomas. The tumors are basically papillary adenomas, although some are very compact and in some fields do not reveal a papillary appearance. Tumors may be surrounded by small neoplastic masses which we have described as "satellite nodules": their margins may be sharp or ill-defined, they may extend into the lumen of bronchioles, and they may show very few or many mitotic figures, but we have never found evidence of metastasis. This absence of metastasis is true of all age groups examined, but the largest numbers of mice, as mentioned previously, were in the 19- and the 24-month categories. Some of the tumors do present a relatively malignant histologic appearance, but in 23 consecutive control mice bearing 31 pulmonary tumors, which were studied in great detail, not a single one was classified as malignant, even on a histologic basis.

Other findings of interest in the control animals at 19 months included an abnormality of the reticuloendothelial system in 7%. This entity is characterized by splenic enlargement in most cases and also in some by excessive lymphoid accumulations in the lungs, markedly enlarged lymph nodes, or hepatomegaly. Blood counts were not done. Four animals, all females, developed extrapulmonary tumors, one of the breast, two of the ovary, and one of the skin. Other breast tumors were seen, but the affected mice did not survive to be killed at 19 months.

Test Animals.—The microscopic appearance of the lung of a mouse dusted for 17

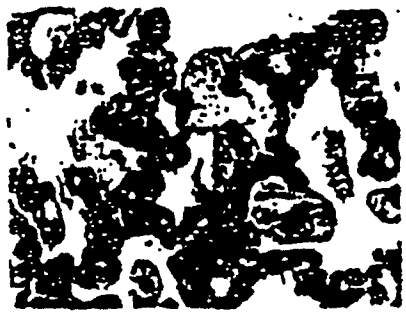

Fig. 4.—Lung of test mouse at 19 months. Mouse B-38 (female). Photograph shows some what congested and thickened alveolar walls. Large "dusty" macrophages are prominent. × 425.

Fig. 5.—Lungs of a control animal (Mouse B-38) and of a test mouse (Mouse B-26). Both animals were killed at 19 months of age. In both specimens the hearts are attached and partially hidden by the lungs. The test lungs are larger and heavier and present a mottled gray pleural surface.



B-38 B-26

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