We have found it expedient to separate cards into periods of years (prior to 1930, 1930–34, 1935–39, 1940–44, 1945–49, and yearly thereafter). This helps a search considerably by eliminating periods in which the searcher is not interested. An index-key enables the user to find any subject quickly. This index also contains "key references," which aid in a general search of a wide field. The original hand-written cards from which the punch cards are typed are maintained as a separate author file.

JOAN STAATS

Roscoe B. Jackson Memorial Laboratory
Bar Harbor, Maine

Received November 12, 1953.

Tobacco Mosaic Resistance in Spain

WORK aimed at the production of mosaic-resistant strains of tobacco was begun in 1934 at the Spanish Tobacco Research Institute. Seed from the Ambalema tobacco was obtained in the spring of 1933 from J. A. B. Nolla, of the University of Wisconsin, who had discovered this resistant strain in the Cauca Valley of Colombia, South America.[1] Susceptible commercial strains were: a Philippine cigar tobacco of small thin leaves; Kentucky Dark; Cantabria, a selection from Kentucky tobacco, with large broad thick leaves; and M. Havana, a selection made in northern Spain from Cuban cigar tobacco. The strain Macrophylla, of large, slightly petiolate broad leaves, received from Scafati (Italy) is of no commercial value.

The first crosses involved Philippine and Kentucky Dark with the resistant Ambalema (Am.). After careful inoculation with the ordinary tobacco mosaic virus from Spain, two selections were made from F_2 progenies; a resistant segregate No. 60 from the Am. × Philippine and No. 61 from the Am. × Kentucky Dark. These segregates did not exhibit all the desirable characteristics for a commercial cigarette tobacco. It was found necessary to improve them by crossing with more desirable strains. Thus, segregate No. 60 was back-crossed to Philippine and to several other tobaccos including Mammoth Havana.

From the new series of crossings several desirable strains have been developed by continued selection from the following:

No. 230-B	(Am. Philippine)	× Philippine
226	"	× Cantabria
243	"	× Macrophylla
240	"	× M. Havana

These strains are not grown on a commercial scale in Spain but they serve as the nucleus around which it is hoped to produce desirable commercial forms.

All the strains mentioned, upon inoculation with the mosaic virus from this country, develop very mild symptoms of the disease. In this sense they are regarded as equal to Ambalema.[2]

ENRIQUE ALCARAZ-MIRA

The Tobacco Institute
Seville, Spain

[1] Nolla, J. A. B., and A. Roque. 1933. A variety of tobacco resistant to ordinary tobacco mosaic. *J. Puerto Rico Dept. Agr.* **17**, 4, 301–303.

[2] Seed is available for distribution to research workers. *Director, Instituto Biología del Tabaco, Seville, Spain.*

Received December 2, 1953.

The Influence of Cortisone, Antibiotics, and Granulestin on Antibody Production

IN a previous report (*1*) it was pointed out that short-term feeding of antibiotics to mice and rats resulted in increased antibody production. Since then antibody production has been studied in rats and mice fed natural foods, stock diets containing 0.1 percent Aureomycin, 0.1 percent Terramycin and 2 percent granulestin. Various combinations of these were tried with and without cortisone.

Cortisone injected rats were given chlortetracycline and oxytetracycline supplemented diet, control diet, diet containing both an antibiotic and granulestin. Salmonella enteritidis antigen was injected while the rats and mice were on the respective diets. In one typical experiment the titer of the rats given cortisone was approximately one-half that of the controls. Rats injected with cortisone receiving antibiotics plus granulestin in their diets yielded a titer higher than that of the controls. In mice it was found that cortisone alone interfered with antibody production very markedly. When mice were injected with cortisone and fed diets containing antibiotics or antibiotics plus granulestin, the agglutinin titers of those animals were several times as great as those of the mice fed control diet.

Additional work is in progress with rats and mice fed diets containing antibiotics to study the effect of cortone given orally and parenterally on resistance to infection.

CHARLES A. SLANETZ

Institute of Research in Animal Diseases
College of Physicians and Surgeons
Columbia University, New York City

Reference

1. SLANETZ, C. A. *Antibiotics & Chemotherapy* **3**, No. 6 (June 1953).

Received November 4, 1953.