SECTION III - Chapter 4. The Story of Lederle's Achromycin

DEVELOPMENT OF THE BROAD SPECTRUM ANTIBIOTICS

Soon after production of penicillin was begun during 1942 and 1943, wide attention was directed to discovering other antibiotics. For example, Dr. Benjamin M. Duggar joined the Lederle staff specifically to lead a program for screening potential antibiotics.

In a little over ten years the pharmaceutical industry isolated and studied more than 3500 different antibiotics, but low potency or high toxicity prevented use of almost all of them. The average of success has been about one new useable antibiotic a year.

The five antibiotic drugs included in the Fond du Lac study are "broad-spectrum," since they are active against both gram-negative and gram-positive bacteria, rickettsiae and certain viruses. The expression "broad-spectrum" dissociates these drugs as a class from such drugs as penicillin, which is active primarily against gram-positive bacteria.

The five drugs have a common derivation—from various species of the actinomycete mold, Streptomyces. Their chemical formulas, except that for Chloromycetin, also are very similar as evidenced by their generic names, and Tetracyn is actually the same as Achromycin. Because exact dates of scientific discoveries are difficult to establish, the most useful dates are those of introductory marketing:

Aureomycin or chlortetracycline
(Lederle) December 1948

Chloromycetin or chloramphenicol
(Parke, Davis) March 1949

Terramycin or oxytetracycline
(Pfizer) March 1950

Achromycin or tetracycline
(Lederle) November 1953

Tetracyn or tetracycline
(Pfizer) February 1954

Because of their wide range of applicable use the five drugs come in a variety of forms. Aureomycin, for example, is available in 20 forms while Achromycin comes in 11 forms ...including capsules, tablets, drops, ointment, powder, and vials for intramuscular and intravenous injection.