Selman Abraham Waksman (1888-1972) was a Russian–American microbiologist. Born in Priluki, Ukraine-Russia, Waksman left Russia and arrived in the United States, in 1910. He attended Rutgers University, graduating in 1915 and became an American citizen, in 1916. After obtaining his doctorate from the University of California, he returned to Rutgers to join the faculty.

Waksman was particularly interested in the soil dwelling microorganisms. This study took a sudden new direction in 1939, when Dubos discovered a bacteria-killing agent, in a soil microorganism. This helped stimulate a new look at Fleming’s penicillin, especially since World War-II had broken out.

Waksman coined the term antibiotic (against life) for chemicals obtained from microorganisms, which killed bacteria, and began to look for such agents. Dubo’s agent and penicillin were only effective in Gram-positive organisms, and did not affect Gram-negative ones. Waksman was therefore interested in some agent that would combat them. In 1941, he reported a new strain of Actinomycyes, which he called Actinomycyes antibioticus. From this strain, he obtained an extract, which inhibited the growth of Gram-negative bacteria. Actinomycycin was effective, but it was too toxic for clinical use. In 1942, he discovered another species of this fungus, later named Streptomyces griseus and in 1943, he finally isolated Strptomycin. It was first successfully used on a human being, on May 12, 1945.

For the discovery of streptomycin, he was awarded the 1952 Nobel Prize in medicine and physiology. He turned the prize money to Rutgers Research Foundation.

Streptomycin was found to be effective against M. tuberculosis. Sadly enough, tubercle bacillus quickly became resistant to this single drug regimen. This prompted introduction of two newer antituberculous agents, in quick succession. Discovery of Para-amino-salicylic acid (PAS), in 1946, was followed by discovery of Isoniazid, in 1950. Good clinical trials showed that combination therapy would invariably cure tuberculosis, if the drug were taken regularly, for the prescribed period. The next five decades have seen tremendous research in newer agents and combinations, with the hope of eradicating tuberculosis.

Unfortunately, despite our experience of 50 years of TB treatment, and availability of numerous effective agents, the incidence of tuberculosis is on the rise. The dreaded MDR and XDR-TB has emerged with the unholy alliance, of the HIV pandemic. Eradication of white plague seems to remains a distant dream.