

Scientific Heritage of Merck Research Laboratories

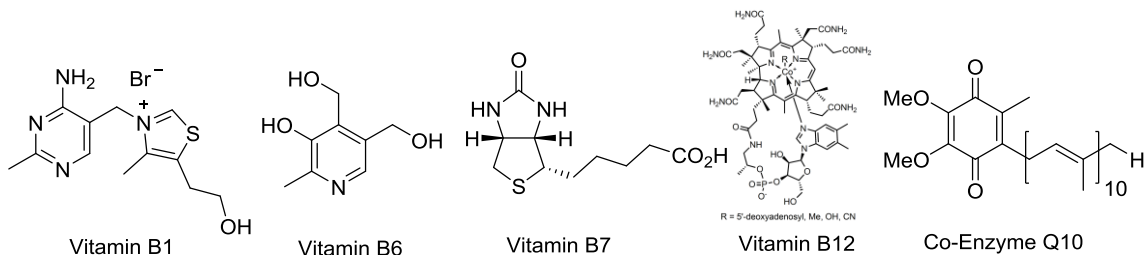
Process Research Laboratories, Merck Research Laboratories,

Nobuyoshi Yasuda

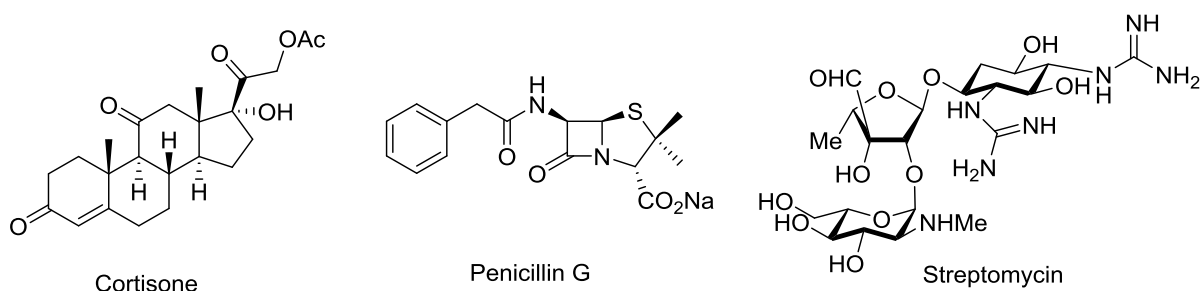
Merck Research Laboratories (MRL) was established in 1933 by Mr. George Merck at Rahway NJ, USA. His vision was clearly summarized in his statement presented at the Medical College of Virginia in Richmond.

“We must try to remember that medicine is for the patient. We try never to forget that medicine is for the people. It is not for the profits. The profits follow, and if we have remembered that, they have never failed to appear. The better we have remembered it, the larger they have been.”

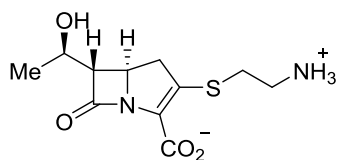
Under his vision, MRL has been striving to provide the best medicines to improve human health, with a foundation of scientific excellence. Early research in MRL started with isolation, purification and manufacturing of various vitamins.



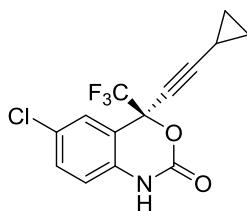
During World War II, MRL was heavily involved in the structural elucidation and commercial manufacture of Cortisone and antibiotics (Penicillin and Streptomycin).



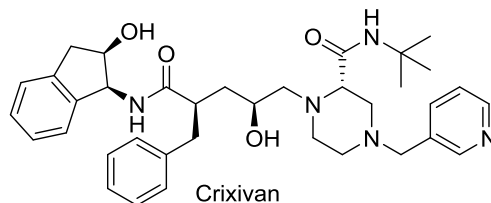
Since then, MRL has contributed to various fields of medicines and science, including the first total synthesis of an enzyme (Ribonuclease), as well as the development of important pharmaceuticals such as carbapenem antibiotics (Thienamycin), anti-HIV medications (Crixivan, Efavirenz, Isentress), substance-P antagonist (Emend), anti-parasitic therapies for animal (Ivermectin), and Type II Diabetes therapy (Januvia).



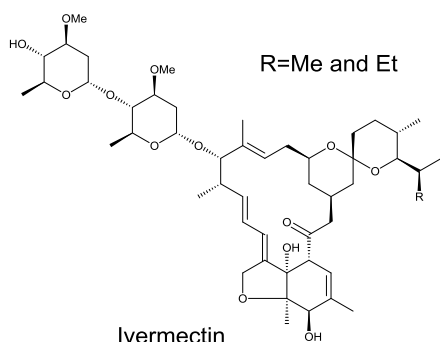
Thienamycin



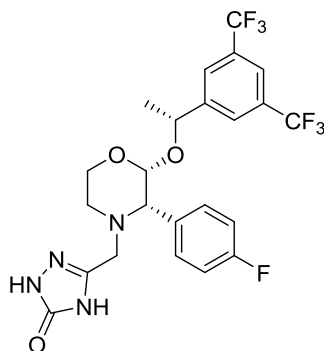
Efavirenz



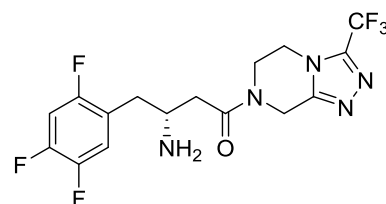
Crixivan



Ivermectin

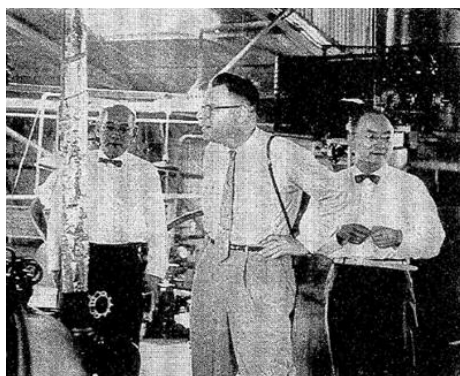


Aprepitant



Januvia

Merck also has a long-standing connection with Japan. For examples, the relationship between Merck and Banyu had been established by selling Cortisone in 1954. During GHQ occupation, Prof. Foster provided technical consultant for production of penicillin in Japan. Dr. Foster was a chemical engineer at Merck prior to become Professor at University of Texas. Ivermectin is the very fruitful result of the collaboration between Prof. Omura at the Kitazato Institute and Merck Research Laboratories.



Prof. Foster at Banyu Penicillin Factory (Okazaki)¹



Prof. Omura and Prof. Tishler²

I will review the scientific heritage of Merck Research Laboratories at the 25th Fukuoka Banyu symposium.

Reference:

1. Yomiuri Shinbun Oct. 9, 1994.
2. Kitazato Institute website.