

Increasing the strategic value of kinetic and dynamic data through unified modelling, higher productivity, and regulatory compliance



Sanofi www.sanofi.com

Sanofi S.A. is a multinational pharmaceutical company headquartered in Paris, France, as of 2014 the world's fifth-largest by prescription sales. Sanofi engages in the research and development, manufacturing and marketing of pharmaceutical drugs principally in the prescription market, but the firm also develops over-the-counter medication. The company covers 7 major therapeutic areas: cardiovascular, central nervous system, diabetes, internal medicine, oncology, thrombosis and vaccines (it is the world's largest producer of the latter through its subsidiary Sanofi Pasteur).

Productivity in clinical development continues to decline, and the inability to increase efficiency has resulted in a pipeline, which is impeded. Some of the causes of this problem are the following:

- Inefficient decision making processes (lack of information, decision not based on quantitative inputs, focus on the wrong areas, loss of knowledge due to changes in staff and assignments, inability to capture information)
- Lack of efficient utilization of technology

These lacks lead to the need for model based drug development such as computer assisted trial simulation. After Sanofi turned to a computer model, using its own animal and human test data, Sanofi was able to simulate later-stage clinical trials. Based on that simulation, the researcher stopped funding the development of the compound. The ratio between the therapeutic benefit and side effect demonstrated that this compound was not enough beneficial. An estimation conducted by Sanofi states that the computer model enable to save Sanofi \$50M to \$100M, the cost of later-stage clinical trials.

Simulation and Forecasting Technology role

Support decision making process, model based drug development

Sector

Pharmaceuticals

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