SANOFI Empowering Life

Drug Discovery Challenge from Target to Clinical Candidate

Samir JEGHAM

SANOFI-AVENTIS R&D, Research Platform-IDD
1 Rue Pierre Brossolette, 91385 Chilly-Mazarin Cedex-France.
samir.jegham@sanofi.com

Early drug discovery has changed dramatically over the recent past. We moved from blockbusters/massive one-fit-all strategy, to a variety of personalized solutions and we are gradually embedding an integrated drug discovery mindset, based on translational sciences [1] rationale.

The challenge Is the target. Once the target is carefully selected and validated we start the hit generation process using a relevant assays and range of modalities [2] from heterocycles to peptides or macrocyclic derivatives, from nucleic acids to ADC's, from monoclonal antibodies to multi-functional antibodies, and we try to diversify our hit finding approach's to not only rely on massive screening.

From another side the majority of pharmaceuticals companies are now totally open and deeply connected with the external scientific community and there eco-systems.

By taking this approach, we expect reduce the risk of failure based on efficacy and safety, thus increasing the probability of success in clinic.

During this presentation I will highlight these paths from target to clinical candidate by presenting some specific cases from Sanofi portfolio.

References:

1. Jayme L. Dahlin, James Inglese and Michael A. Walters. *Nature Reviews Drug Discovery 2015*, pp279-294.

2. Herbert Waldmann, Eric Valeur, Stéphanie M. Guéret, Hélène Adihou, Ranganath Gopalakrishnan, Malin Lemurell, Herbert Waldmann, Tom N. Grossmann, Alleyn T. Plowright. *Angew. Chem. Int. Ed*. 2017, 56.