

Sanofi is dedicated to supporting people through their health challenges. We are a global biopharmaceutical company focused on human health. We prevent illness with vaccines, provide innovative treatments to fight pain and ease suffering. We stand by the few who suffer from rare diseases and the millions with long-term chronic conditions. With more than 100,000 people in 100 countries, Sanofi is transforming scientific innovation into healthcare solutions around the globe.

INTERNSHIP

MISSION

Subject: Evaluation of expert elicitation methods to support decision making in clinical development

Context : All clinical trials are designed for success of their primary objectives. Hence, assessing the probability of success (PoS) should be a key focus at the design stage to inform trial design but might be very difficult to estimate at early development stage due to the limited knowledge available. In order to improve the design performance, an informative Bayesian approach may help but in some situations, no or very limited historical data exist, so that the use of knowledge from experts can be used to elicitate (or complement) a prior and results in a more appropriate PoS estimate.

Several approaches to gather expert's information have already been published, as well as several methods to analyze this information (e.g. SHELF method)*.

Mission : The intern will perform a thorough literature review for expert elicitation existing methods and provide a summary and recommendations. This summary will support a two stages implementation including an elicitation process to gather expert information and methods to analyze expert information. Then, the chosen methods will be compared through simulations. Concurrently, a study case from internal project will be proposed in order to implement the elicitation process and experience communication with clinicians and experts. This work will give an insight on the difficulties which might be encountered in a real-life setting. Finally, the intern will provide a full report and recommendations. The internship will be part of an existing Sanofi working group with statisticians across different sites (France, US), studying prior elicitation methods. The intern will have to work closely with the members of this working group, will attend related meetings in English and if required, report his/her work through presentations.

PROFILE

Level: MASTER/ BAC + 5 (ENSAI, INSA, Master 2 University, ISUP ...)

Required Skills:

Good knowledge of R, Bayesian methods knowledge would be appreciated

Rigor, Autonomy, initiative and proposal, good communications skills
Very good level of English required (active participation to meetings in English)

Duration: 6 months (beginning between February and April)

Location: Sanofi, Chilly Mazarin (FR) or Montpellier (FR)

If you are interested, please apply directly to the following tutor by mail:

(*) Main bibliographic references:

Dallow N, Best N, Montague T. Better decision making in drug development through adoption of prior elicitation. Submitted to Pharmaceutical