A CASE STUDY COMPARISON: THE ADAPTIVE INTEGRATED DESIGN VS. THE TRADITIONAL SEQUENTIAL APPROACH

Traditional approaches to First-In-Human (FIH) trials typically involve a Single Ascending Dose (SAD) phase, followed by a Multiple Ascending Dose (MAD) phase, with a Food Effect component initiated thereafter.

To accelerate early stage clinical results and for an earlier entry into Phase II, Algorithme Pharma provides sponsors with the option of using an Adaptive Integrated Design. This approach to Phase I projects overlaps the SAD, MAD and Food Effect phases and allows for the possibility of incorporating a Proof-of-Concept (POC) arm in patients, which results in reducing Phase I clinical timelines by up to 67%.

Traditional Sequential FIH Design

The MAD phase was initiated following completion of the SAD phase, followed by the Food Effect phase, at predefined dose levels. Overall, seven SAD cohorts and six MAD cohorts were completed sequentially with the Food Effect phase over a period of 15 months.

Adaptive Integrated Design

The SAD, MAD and Food Effect cohorts (prescheduled and adaptive) were run in parallel during the study conduct. Following favorable safety review of data from the first three SAD cohorts, the first MAD phase cohort could be conducted (4 weeks following the start of the first SAD cohort). In total, five SAD cohorts and seven MAD cohorts were completed simultaneously with the Food Effect phase, over a period of 28 weeks. Following the MAD phase completion, a prescheduled Proof-of-Concept (POC) patient arm was initiated and completed within 10-weeks, for a total of 9 months for the entire FIH Adaptive Integrated Design.

The Integrated Design also provides the benefit of investigating new dose levels in adaptive cohorts based on real-time results. To ensure participant safety, the start-stop criteria are developed and implemented prior to trial commencement. With the Adaptive Integrated Design, both the SAD and MAD phases are completed simultaneously allowing for accelerated clinical results and an earlier entry into Phase II.