

Introduction

Emerging pharma companies require fast, flexible and responsive project partners to ensure their projects are delivered on time, and on budget. Apex Molecular has a proven track record in delivering making us the partner of choice for chemistry services in Discovery Projects.



The Challenge

A virtual UK pharmaceutical company chose Apex Molecular as their chemistry partner for their discovery program. They required a complex 8 step synthesis of an advanced intermediate compound under a tight timeline to support of their medicinal chemistry program. The project required rapid scale up (starting on 20L scale) and process improvements as previously the compound had only been synthesised in low gram quantities and 50 g of material was required.

Solution & Outcome

The project was initiated on 200g scale (20L reactor) and a number of parameters were optimized ahead of manufacture e.g. reaction concentration, work up volumes, intermediate purification and isolation. A key finding was the improved reaction conditions for the final step that reduced the formation of an impurity resulting in a higher product recovery and purity.

Overall the project delivered 60 g of product in 6 weeks, with an overall yield of 21% and a purity of >95% and e.e. >99%.