From Discovery to Clinical Development: Your Trusted Chemical Support Partner

SONEAS
Chemistry for a better life

ABOUT US

SONEAS Chemicals Ltd., a member of the UQUIFA Group, boasts over 25 years of experience in early-phase development. We are committed to delivering end-to-end solutions in Active Pharmaceutical Ingredient (API) development with high flexibility and exceptional turnaround times. Our team of highly skilled chemists (PhD and MSc) is dedicated to providing innovative and efficient solutions to meet our costumers' project needs.

DISCOVERY SERVICES

Our discovery chemistry team offers extensive services, including:

- **AI Supported Drug Discovery:** Utilizing advanced AI algorithms, we accelerate drug discovery by predicting compound efficacy, optimizing molecular structures, and identifying potential drug candidates with greater accuracy and speed.
- **Targeted Library Synthesis:** Custom synthesis of compound libraries to facilitate lead optimization.
- **Lead Optimization:** Supported by computational chemistry partnerships and advanced AI algorithms, we optimize lead compounds for enhanced efficacy and safety. Our AI-supported drug discovery accelerates the identification and refinement of potential drug candidates, ensuring more accurate and efficient outcomes.
- **Asymmetric Synthesis:** Expertise in asymmetric transformations, including the use of carbohydrate-based molecules and natural product analogues.
- **Organometallic Chemistry:** Proficiency in metathesis and other complex transformations for economical compound production.
- **Building Blocks and Reference Compounds:** Synthesis of high-purity building blocks, scaffold analogs, and reference compounds.
- **Specialized Chemistries:** Expertise in heterocyclic chemistry, natural product synthesis, impurities & metabolite synthesis, route scouting, and both early and late-stage process optimization (PRO).

ANALYTICAL SUPPORT

Our high-quality chemistry services are complemented by robust analytical support, ensuring the integrity and purity of synthesized compounds:

- **NMR Spectroscopy:** Equipped with a 500 MHz Bruker NMR for detailed structural analysis, including ^{1}H, ^{13}C, ^{19}F, ^{31}P, ^{11}B, and ^{15}N nuclei.
- **LCMS, HPLC, and UPLC:** Advanced chromatographic techniques with PDA and CAD detection for precise purity assessments.
- **GC-FID and GCMS:** Comprehensive support for GC-compatible molecule analysis.
- **Chiral Method Development:** Specialized methods for both HPLC and GC to ensure the highest purity of enantiomers.
- **Full Characterization Tools:** Including FTIR, UV-VIS spectroscopy, polarimetry, titrations, DSC, and melting point analysis.

CASE STUDY: STREAMLINING LEAD OPTIMIZATION IN NEUROLOGICAL DISEASE TREATMENT - A COLLABORATIVE APPROACH

Introduction:

In the pursuit of developing novel treatments for neurological diseases, the collaboration between chemical and biology teams plays a crucial role. This article sheds light on SONEAS Chemicals Ltd., a member of the UQUIFA Group's significant contribution as the chemical support in a consortium working towards the optimization of a New Chemical Entity (NCE) for neurological disease treatment.

Background:

SONEAS Chemicals Ltd., a member of the UQUIFA Group, as part of a consortium, assumed the responsibility of providing chemical support for targeting a novel NCE intended for the treatment of neurological diseases. The primary focus was to optimize the lead compound from its initial identification, ensuring it evolves into an effective chemicals available molecule.

Aims:

The overarching goal was to streamline the lead optimization process, transitioning from traditional linear synthesis methods to a more dynamic and efficient approach. This involved identifying key intermediates and developing scalable processes that not only saved time and resources but also facilitated a swift response to biological results.

Abandonment of Traditional Synthesis:
The consortium decided to move away from old, traditional linear synthesis methods, recognizing the need for a more adaptive approach in the complex field of neurological disease treatment.

Identification of Key Intermediate:
A pivotal milestone was achieved by identifying a key intermediate collaboratively with the biology team. This intermediate contained a base structure that could be easily modified to optimize biological properties.

Scalable and Robust Process Development:
A scalable and robust process was developed for the key intermediate, emphasizing efficiency to save both time and money during the lead optimization phase.

Analytical Method Development:
To ensure the quality of the synthesized compounds, analytical methods were developed to monitor both chemical and chiral purity. This step was essential for maintaining the integrity of the compounds throughout the optimization process.

Close Collaboration with Biology Team:
A close collaboration system was established with the biology team, allowing for the daily delivery of new molecules. This enabled a rapid response to biological results, with the synthesis of new compounds occurring within a few days.

Actions, Achievements:

Lead Compound Selection in 12 Months:
The collaborative efforts between the chemical and biology teams resulted in the selection of a highly effective lead compound within a remarkably short timeframe of 12 months. This success was attributed to the excellent collaboration involving three Full-Time Equivalents (FTEs) in the chemical part.

Scalable Synthetic Procedure for Pre-clinical Activities:
A scalable synthetic procedure was developed, ensuring the readiness of the lead compound to support further pre-clinical activities. This laid the foundation for the compound's progression towards clinical trials.

Capability for Quantity Scaling:
SONEAS Chemicals Ltd., a member of the UQUIFA Group, proved advantageous, as it enabled the capability to scale up the production of Active Pharmaceutical Ingredients (APIs). This positioned SONEAS Chemicals Ltd., a member of the UQUIFA Group, to provide extensive support for delivering the lead compound at higher quantities, crucial for advancing into clinical phases.

Conclusion:

SONEAS Chemicals Ltd., a member of the UQUIFA Group's strategic actions and achievements in collaboration with the biology team underscore the importance of a multidisciplinary approach in drug development. The successful transition from traditional methods to an adaptive and collaborative framework not only expedited lead optimization but also positioned the consortium for further advancements in the treatment of neurological diseases.

FLEXIBLE DELIVERY MODEL

A flexible delivery model enables clients to work closely with our technical teams. Our teams are preparing detailed regular updates followed by telephone conferences and detailed development reports to ensure transparency during the work and supporting the most efficient way to make decisions together with the partner even during the project.

Our clients can choose from:

- Full-time equivalent (FTE)
- Fee-for-service/Fixed Fee (FFS)
- Time and Materials (T&M)

business models whichever fits their requirements better.

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