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 your project needs.

DISCOVERY SERVICES

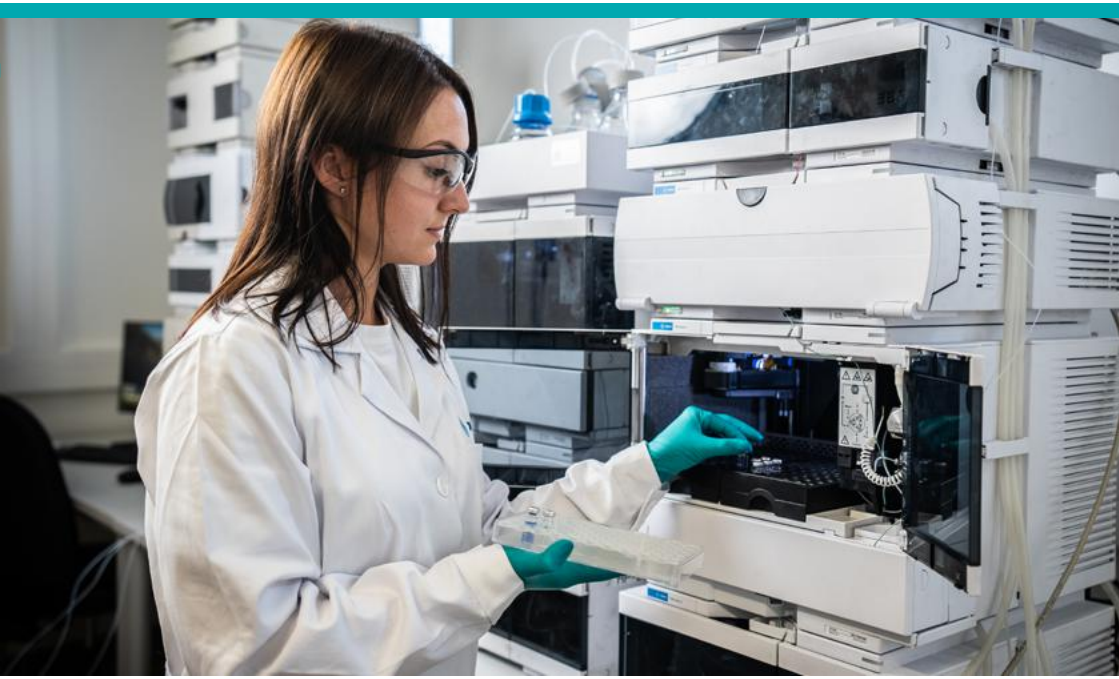
Our discovery chemistry team offers extensive services, including:

- **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: DEVELOPMENT OF A NEW ROUTE FOR COMPLEX HETEROCYCLIC ACTIVE PHARMACEUTICAL INGREDIENT (API)

Background

SONEAS Chemicals Ltd., a member of the UQUIFA Group, was approached by European Biotech company who faced a critical challenge: developing a commercially viable synthesis route for a complex heterocyclic Active Pharmaceutical Ingredient (API) within an extremely short timescale. The European Biotech company's initial multi-step synthesis route was not feasible for commercial production, necessitating an innovative solution.

Aim

To create a commercially viable and efficient synthesis route for a complex heterocyclic API suitable for toxicology studies and clinical trials.

Actions

Initial Supply and Research:
Supplying Multigram Quantities for Toxicology: To meet immediate needs, we supplied multigram quantities of the API using the client's original linear medicinal chemistry route. This approach ensured the continuation of toxicology studies while we developed a more scalable solution.

Research into Scalable Routes: We initiated comprehensive research to develop key building blocks through scalable routes. Our goal was to identify methods that would streamline the synthesis process, enhance efficiency, and reduce costs.

R&D Programme:
Parallel Development Effort: Our R&D team carried out an extensive development programme in parallel with the toxicology supply effort. This dual approach ensured that we could meet short-term needs while focusing on long-term manufacturing feasibility.

Determining the Future Manufacturing Route: The R&D programme was designed to identify the most efficient and scalable synthesis route for future large-scale production. We focused on optimizing each step to improve yield, reproducibility, and cost-effectiveness.

Production of Representative Samples: As part of our validation process, we produced representative samples of the API using the newly developed synthesis route. These samples were rigorously tested to ensure they met all required specifications.

Achievements

Successful Large-Scale Production:
Preparation of Multi-Kilogram Batches: We successfully prepared multi-kilogram batches of the complex heterocyclic API. This achievement demonstrated the scalability and robustness of the new synthesis route, providing the client with the quantities needed for toxicological studies and clinical trials.

Patent and Technology Transfer:
Patent of New Synthesis Route: The new synthesis route, characterized by its reproducibility and higher yield, was patented by the client. This patent underscores the innovation and effectiveness of the developed process.

Transfer to a Large-Scale CMO: We successfully transferred the technology to a large-scale Contract Manufacturing Organization (CMO). This transfer ensures that the client can meet future production demands with a commercially viable process.

Conclusion

Our project showcased significant efficiency and cost-effectiveness by reducing production costs and improving yield and reproducibility, making the API commercially viable for large-scale manufacturing. Through innovative approaches, we transformed an initially unfeasible process into a scalable and efficient route, emphasizing our expertise in complex API development. The successful technology transfer to a CMO ensures scalability to meet future demands, facilitating the transition from clinical trials to market readiness. By maintaining close collaboration and providing ongoing support, we aligned our solutions with the client's needs and timelines. Our ability to deliver immediate supply and ensure long-term manufacturing feasibility underlines our commitment to supporting the client's clinical and commercial objectives.

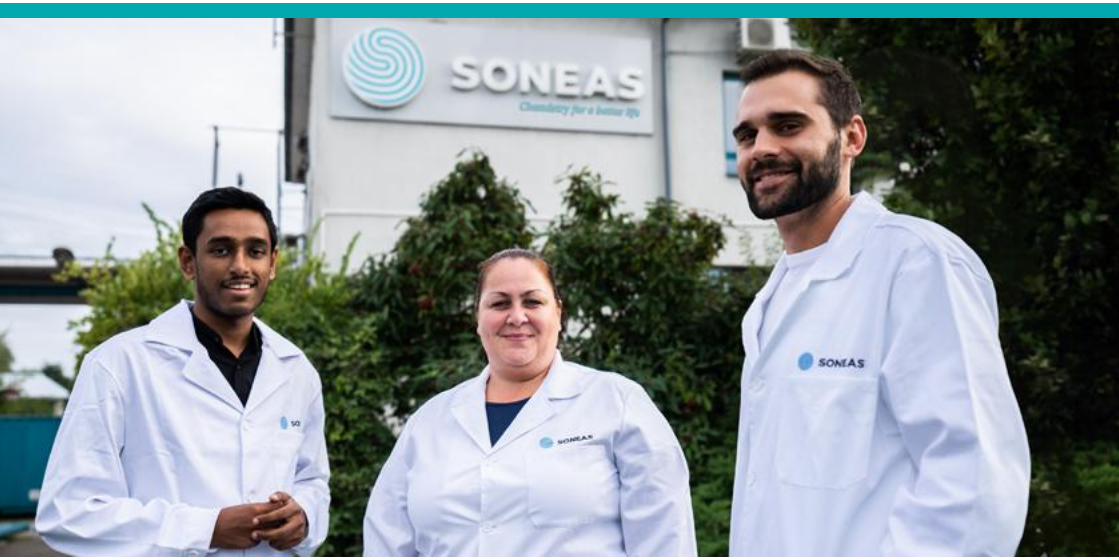
FLEXIBLE DELIVERY MODEL

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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