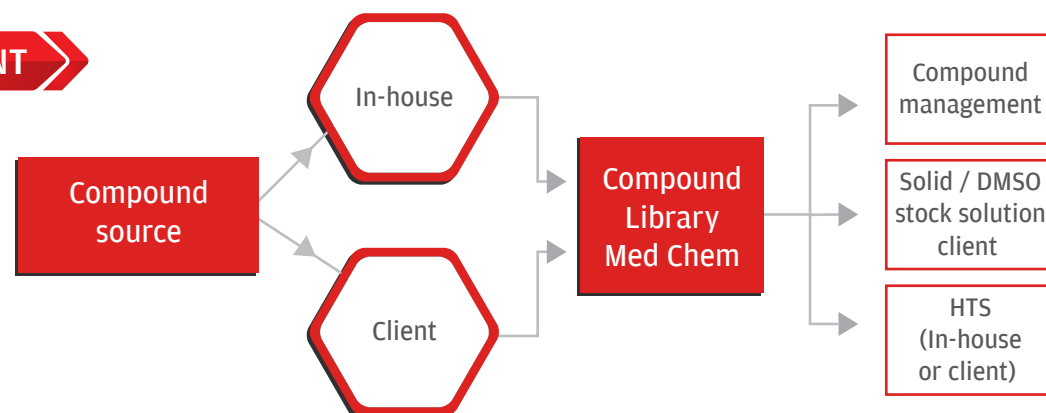


COMPOUND MANAGEMENT

- Ensure compound accessibility and integrity
- Enable efficient compound usage and tracking
- Process customization



INFRASTRUCTURE

- A dedicated laboratory space with state-of-the-art instruments
- In-house inventory of monomers (>5k) and chemicals (>60k)
- Proprietary and commercial database to facilitate library design
- Compound management with HTS facility

Key instruments

- Liquid Handling System (TECAN, Freedom EVO-2 150 Base)
- APMS (Waters, 3100 Mass Detector, 2767 Sample manager, Waters 2998 PDA detector, ELSD detector)
- LC-MS (Aquity UPLC, Waters Triple Quadrupole Mass, Agilent 385 ELSD Detector)
- Genevac (HT-4X, EZ-2 standard)
- Nitrogen Blow Down (Gals Col – 96 well plate)
- Thermal Plate Sealer (Agilent)
- Glove Box (MBRAUN UNILab)
- Aluminum Reaction Blocks (4mL, 8mL and 40mL vials)



GVK BIO has a strong track record in delivering focused to large libraries in the Parallel Medicinal Chemistry platform. Our capabilities include design strategies using computation technologies & proprietary databases, synthesis and post-production activities that includes purification, evaporation, in-process analysis, dilution, plating and registration of compounds in 96 well plate format.

OUR SERVICES

Capabilities

- Solid and solution phase synthesis
- Focused to large libraries
- Cryogenic reactions
- Proof of concept to production through validation process

Expertise

- Rich experience in metal mediated chemistry
- Mass mediated (APMS) technology coupled with evaporation systems (Genevac)
- Proficiency in dilution of samples in mM concentration in mother/daughter plates

Design hypothesis

De-Novo libraries

- Libraries from novel scaffolds
- In-house virtual libraries

Natural product based

- Libraries from existing Natural Products
- Scaffolds inspired from existing Natural Products (Linear hybrids, diversity oriented synthesis)

Target based

- Kinases, GPCRs, Ion-Channel, Nuclear Receptors
- Docking Studies

Fragment based

- Libraries of small molecules (MW<300)
- Testing based on target

Broad overview of chemistry handled

- Suzuki coupling/Buchwald coupling reactions
- Acid-amine coupling, esterification and hydrolysis
- Pyrazole, pyridine, spiroisoxazole, oxadiazole
- Displacement reactions
- Nucleophilic conversions & SNAr type reactions
- Acylation, alkylation, urea, carbamate
- Reductive amination

Functional proficiency

- SOP driven process for library execution
- Dedicated procurement and logistic team
- Customised final report



PARALLEL CHEMISTRY ACTIVITIES

With an extensive experience of more than 7 years, the library synthesis team is known for its commitment and timeliness. They are supported by dedicated analytical, procurement and compound management teams.

Scaffold Generation

- In-house chemical inventory (>60k)
- Procurement
- Customer source
- Synthesis

Monomer Selection

- Procurement
- Synthesis
- In-house inventory of >5K monomers with SD files

Validation

- Selection of representative set of monomers
- Optimisation of reaction parameters and work-up procedures
- Identification of reaction platform (block, carousel plate, reacti-therm)
- Development of analytical method for reaction monitoring & purification
- Compound stability & solubility

Production

- Low to medium throughput solid/solution phase parallel synthesis workstation
- Solution phase parallel synthesis on plates (24 well/96 well format)
- Shakers (Flat bed and orbital rotary type), Customized heating blocks
- Radley's carousel, Custom built teflon vessels
- Temperature Range -20°C to 150°C
- Reactions under inert atmosphere
- SPE filtration manifolds



PURIFICATION PROCESS FLOW

Our experienced library synthesis team provides a 24x7 technical support towards reducing the delivery cycle. All library compounds are purified using parallel purification techniques to meet purity criteria set by clients.

