



Chemistry, Manufacturing, and Controls

Atheln, Inc. is a **multi-disciplinary** life science consulting firm with a broad range of execution capabilities. We cost-effectively tailor the integrated, cross-functional approach to product development and commercialization, practiced by successful life science companies, to the needs of our clients. Our team's hands-on involvement ensures effective planning, execution and management of deliverables. We can work closely with your internal staff, or serve as your **development team**.

The Atheln team provides a depth and breadth of CMC services, including:

- Technical due diligence & strategic planning
- Design and lead the execution of Integrated CMC (Chemistry, Manufacturing & Controls) development plans for an IND submission, including:
 - Evaluation of manufacturing process development data and analytical data for bulk drug substance (BDS) at different scales to establish Phase appropriate specifications and in-process controls requirements
 - Evaluation of existing analytical characterization data for molecule and identification of additional testing and testing sites as needed
 - Design of molecular characterization studies
 - Assist contractors with planning, execution and reporting of analytical method development and validation programs to optimize time and cost
 - Evaluation of formulation and fill & finish development data for drug product (DP) and assist on their optimization
 - Design of Phase appropriate stability studies and plan to support filing timeline
 - Assist on the selection, qualification and use of reference standards for BDS and DP at each stage, including set up of specifications and control program
 - Set up of Phase-appropriate specifications for BDS & DP
 - Design of stability studies for BDS & DP
 - Design of analytical comparability studies
- Design of analytical strategies for all stages of product development, including:
 - Design and setup of analytical laboratories, including equipment evaluation
 - Analytical method troubleshooting & optimization / design of validation protocols
 - Data evaluation, analysis and writing of reports / opinions
 - Design and interpretation of protein and glycosylation analysis
 - Design and interpretation of carbohydrate analysis



- Selection, auditing and management of CMOs, contract laboratories and critical suppliers, including:
 - Writing and negotiation of Quality Agreements
 - Vendor qualification
 - Management of project execution

- Set up of stage-appropriate Quality Systems
 - Build the necessary components of a Phase appropriate Quality Policy, including SOPs, document archiving and control, qualification of contract organizations, implementation and training. For more details see our Quality Section.

- Writing of CMC sections, Technical Reports & Opinions / Participate in meeting with Regulatory Agencies

- Technical Investigations / Troubleshooting / Optimization & Problem Solving