

Biopharmaceutical and aseptic manufacturing processes of

Tomorrow: Today



## **Manufacturing Science and Technology**

Process development. Commercial production. Successful product launch

As experts in biopharmaceutical and aseptic manufacturing processes, we provide state-of-the-art technical-scientific as well as regulatory expertise, tailored for the pharmaceutical industry.



## Many years of experience and numerous successful projects

As an experienced partner with a multitude of proven successful projects, we support you during process development and characterization, through to transfer and validation projects and process life cycle. We offer consulting, technical project management as well as the monitoring, data analysis and documentation of necessary studies in order to ensure your success. We work in accordance with current legislations and FDA/EMA requirements and advise you on the implementation of currently applicable (legislative) requirements.

#### Increased profitability

We ensure that all project resources - internal and external - are used optimally during the entire project period.

Individual concepts are integrated into platform strategies for higher flexibility, reduced workload and a more promptly achieved, successful submission.

#### On time

Our customizable staff allocation ensures flexibility even during peak workload periods. Consequently, you can rely on a duly submission at all times.

#### **Process Process validation** characterization Scale-down Bulk active ingredients model qualification and finished medicinal products Risk assessment & study design Platform approach & generic study design Process control strategies CPV Manufacturing **Tech Transfer** Campaign preparation Facility / Lab-to-site; site-to-site SOPs & manufacturing equipment setup instructions Location suitability and gap Facility fit reviews analysis Microbial control strategy Process simulations Comparability / stability Deviation management



## **Our Services:**

#### **Conceptual support and management:**

- Process development / CMC projects
- Process characterization
- Technology transfer for commercial proucts and from R&D
- Process validation
- Platform and QbD strategies
- OPV / CPV programs
- Process intensification
- Process analytical technology (PAT) and multivariate process control
- Support during regulatory filing and pre-approval inspection

#### Study design and documentation:

- Process development
- Process characterization
- Process validation
- Cleaning validation
- Technology transfer of manufacturing processes
- Statistical process control (CPV/OPV)
- Process optimization and debottlenecking

## Health authority inspections – preparation and management

## Creation of risk analyses, control strategies, studies:

- Facility fit / tech transfer risk analyses
- Process control strategies (ICH Q8)
- Contamination control strategies (Annex 1)
- Virus control strategies
- Process parameter risk analyses
- Evaluation of cleaning validations
- Assessments and study support on current regulatory topics such as elemental impurities, nitrosamines, extractables & leachables, microbial control
- Study protocols, data analysis and reporting



### **YOUR CONTACTS:**

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