

Your Technology Experts for API & Intermediate Manufacturing

FOOTPRINT

HANDPRINT

1 Catalysis

- From first lead to scale up: End-to-end service for catalytic reactions
- Over 30 years of experience in developing, tailoring and commercializing catalysts
- Global cGMP API production sites; up to 25 bar and up to 16,000 liters

2 Microbial Fermentation

- From in-house strain development to commercial production
- Six fermentation sites across Asia, Europe and the US with pilot to full scale capacity
- Pharma, advanced food ingredients and nature-identical materials

3 Biocatalysis

- Inhouse enzyme development and technology platform
- >20 different enzymes applied at production scale
- Combined biotransformations through whole cell catalysis

4 Continuous Processing

- Decades of experience and track record in continuous processing
- Flow chemistry and continuous downstream including crystallizations and chromatography
- Development, pilot and manufacturing capabilities

5 Chemistry in Water

- Micellar catalysis enables a broad range of reaction types
- Reduces need for organic solvents and carbon footprint
- Improved reaction performance, higher yields, increased selectivity, and reduction of catalyst loading

6 Advanced Processes

- State of the art digital solutions for process development and execution
- AI supported, expedited development, optimization, implementation
- Process analytical technology

7 Chiral Chemistry

- 40 years in development, scale-up and production of chiral compounds
- Established production of over 100 chiral products including natural and non-natural amino acids
- Chemo-catalytic and chiral pool synthesis and chiral resolution and separation technology

8 Cryogenic Chemistry

- 200 m³ western based cryogenic reactor capacity (steel, Hastelloy and glass lined)
- Organometallic reactions including lithiations, Grignards and complex hydrides
- Batch and continuous processing

9 Crystallization

- Particle technology laboratories in Europe and the U.S.
- Crystallization, solid-liquid separations, drying and milling development
- End-to-end service from solid form screening to production support

1 Complex APIs

- Western based manufacturing capacity for even the most complex projects
- Broad portfolio of differentiating technologies
- Sustainable, flexible and scalable solutions for end-to-end reliability

2 High potency APIs

- 170 m³ total capacity
- Reactor volumes from lab scale up to 7,600l
- OEL down to 5 ng/m³ for small scale and 0.1 µg/m³ for medium and large-scale production

3 Controlled Substances

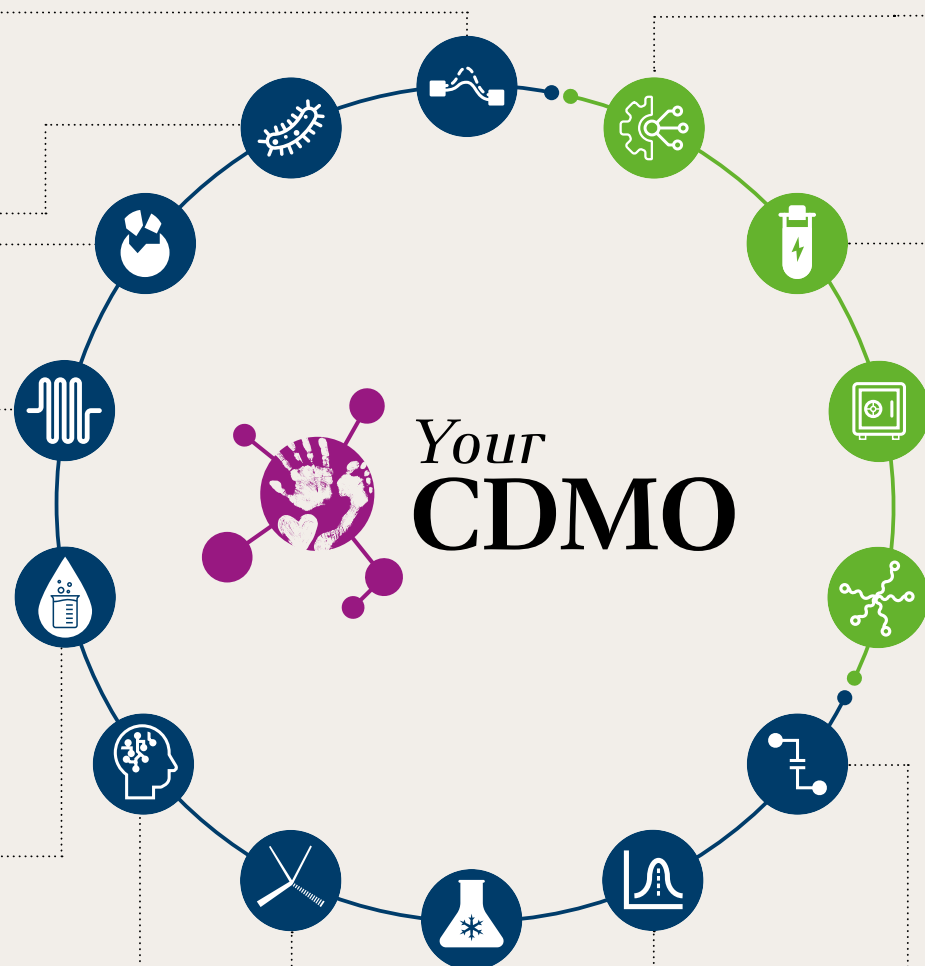
- Western based manufacturing hub for scheduled drugs and intermediates
- On-site development and analytical capabilities
- Generic APIs as well as CDMO services

4 Highly Pure mPEG and PEG Linkers

- Highly pure PEGs and mPEGs for PEGylation and linker conjugates
- From 2000 kDa to 50000 kDa with narrow PDIs and high purities
- Off-the shelf grades and custom solutions available

10 Chromatography

- Dedicated expert team for chromatographic separation development
- Low and high-pressure separations at scale across Europe and the U.S.
- Batch and continuous (SMB) operations



Your
CDMO