

COMET CENTRE (K1)

RESEARCH CENTER PHARMACEUTICAL ENGINEERING GMBH

RESEARCH PROGRAMME: [RCPE – RESEARCH CENTER PHARMACEUTICAL ENGINEERING]

Main location: Graz (Styria)

Other locations: -

Thematic area: Life Science



Thematic focuses

- Resilient supply chains for both personalized and large-volume medicines
- Formulation and manufacturing of new modalities, biologics and nano-structured delivery forms
- Next-generation digital design tools for complex products
- Science of quality, including solutions for speeding up regulatory approval models

Planned realisation and outcomes

- A robust system for making medicines (substance & products) via high-speed technology that can revolutionize pharmaceutical manufacturing ecosystem
- Validated personalized manufacturing concepts
- Massively speeding up DEM simulations of continuous processes
- AI and ML approaches for product and process development
- Integrated screening protocol for lipid-based product development
- Toolbox to optimize peptide synthesis / purification
- Rational in vitro and in silico methodologies for evaluation of inhaled product performance
- Novel soft sensor approaches to control different tablet quality attributes in a continuous powder-to-tablet line
- Implementation of a beyond-the-state-of-the-art continuous manufacturing line connecting hot-melt extrusion and a continuous direct compaction line.

History of establishment

RCPE has generated an impressive track record since 2008, e.g., a large non-government funded business area, >500 publications in top journals, the creation of 4 spin-off companies, 17 patents & licenses, 3 endowed professorships, 140+ employees and a state-of-the-art pilot plant that is unrivaled by others. In addition, the RCPE has succeeded in building a dedicated, high-level staff committed to advancing science and pushing the envelope in developing pathways to the medicines of the future. A testament to the relevance of our work is that even the FDA is now collaborating with RCPE.

COMET FACTSHEET

Selected company partners (max. 10):

1. Astra Zeneca UK Ltd.
2. Baxter AG (Takeda)
3. Boehringer Ingelheim
4. F.Hoffmann-La Roche Ltd
5. G.L. Pharma GmbH
6. Merck KGaA
7. MG2 Srl.
8. P&G Health Austria GmbH & Co OG
9. Pfizer Inc
10. UCB Pharma SA

Selected scientific partners (max. 5):

1. Graz University of Technology
2. Joanneum Research Forschungsgesellschaft mbH
3. Medical University Graz
4. University of Cambridge
5. University of Graz

Selected international¹ partners (max. 5):

1. Chiesi Farmaceutici S.p.A., Italien
2. Colorcon, USA
3. IOI Oleo GmbH, Deutschland
4. Lonza Ltd, Schweiz
5. University of Lisbon, Portugal

Duration: 01.07.2023 bis 30.06.2027 (4 years)

Staff employed at the Centre: 119 FTE, thereof 66 scientists

Management: Univ.-Prof. Dr. Johannes G. Khinast, CEO & Scientific Leader
Dr. Thomas K. Klein, CEO & Business Leader

Contact: Research Center Pharmaceutical Engineering GmbH
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The COMET Centre is funded within COMET – Competence Centers for Excellent Technologies – by BMK, BMAW as well as the co-financing federal provinces [Styria]. The COMET programme is managed by FFG.

www.ffg.at/comet

¹ Partners with headquarters outside Austria