

The **Research Center for Pharmaceutical Engineering (RCPE)** is a global leader in pharmaceutical engineering sciences. We help our partners to create and manufacture advanced medicines for patients around the world, through optimizing products and processes.



WE ARE OFFERING A

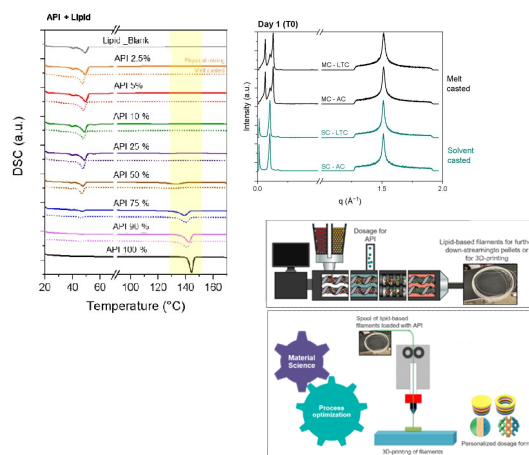
# PAID DIPLOMA/ MASTER'S THESIS

EFFECT OF THE COMPOSITION OF LIPID-BASED EXCIPIENTS ON THE PERFORMANCE OF API LOADED FILAMENTS PREPARED FOR 3D-PRINTING  
REF. NO. DA153

To dedicated students of Pharmacy, Chemistry, Pharmaceutical Engineering, Chemical Engineering, or related disciplines, we offer an opportunity to write a paid Diploma/Master's thesis. The project is conducted in close cooperation with industrial partner.

## OBJECTIVE:

Filament-based 3D-printing is the promising green technology for the patient-centric pharmaceutical product development. Application of lipid-based excipients supports the sustainability of this technology. The aim of this master thesis is to investigate the variation in the composition of a group of lipid-based excipients and its effect on the API-excipient interaction in terms of drug loading, alteration in the solid-state and solubility of loaded API. The gathered knowledge will be used afterwards for the development of filaments via solid lipid extrusion and their 3D-printing for manufacturing dosage forms with defined solid state and release profile.



WITHIN THE FRAMEWORK OF THIS DIPLOMA/ MASTER'S THESIS WE OFFER THE FOLLOWING:

- Extensive participation in a top-level and industrially relevant research project in an international environment
- Supervised training in the task
- Assistance of experienced staff with the implementation of innovative ideas
- Access to highly modern infrastructure on campus of Graz University of Technology
- Assistance with the publication of results
- Adequate compensation and opportunities for personal and professional development

## FINANCING:

- Compensation on the basis of a service contract

IF YOU ARE INTERESTED IN WRITING YOUR THESIS AT THE INTERFACE BETWEEN UNIVERSITY RESEARCH AND INDUSTRY/ BUSINESS AND TO CONTRIBUTE TO THE OPTIMIZATION OF PRODUCT AND PROCESS DEVELOPMENT IN THE PHARMACEUTICAL INDUSTRY, PLEASE CONTACT US INDICATING THE REFERENCE NUMBER.

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