research center pharmaceutical engineering

The Research Center Pharmaceutical Engineering (RCPE) is an interdisciplinary research institute in the area of pharmaceutical process- and product-development in Graz, Austria. Our goal is to establish technology to transform current product and processes development approaches in the pharmaceutical and diagnostics industries into a science-based endeavor together with our partners.

# PAID DIPLOMA/MASTER'S THESIS

## *Experimental Investigation of a Pharmaceutical Dryer Prototype Regarding Drying Efficacy and Particle Behavior*

***Ref.Nr. DA108***

To dedicated students of process, mechanical and 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 industry partners and supervised by Prof. Khinast of the Institute of Particle and Process Engineering.

### OBJECTIVE:

The aim of this study is the experimental investigation of a novel dryer prototype. The dryer was developed with industrial partners and will be available at RCPE soon. It was designed to be able to continuously process small streams of thermosensitive materials with a narrow residence time distribution (RTD) to a very low residual moisture. The main parts of the thesis will be:

- Survey of literature for state of the art powder drying equipment
- Experiments with varied process parameters (i.e. pressure, temperature, moisture content), including sample taking and necessary process supervision with auxiliary activities
- Evaluation of feed and product samples with suitable measurement methods to analyze changes in particle shape and size
- Interpretation of the drying performance and estimation of the drying kinetics based on the results from the experiments

### 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.

**Research Center Pharmaceutical Engineering GmbH**
Sandra Resl
Inffeldgasse 13, A-8010 Graz
Tel.: +43 316 873-30904
sandra.resl@rcpe.at