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

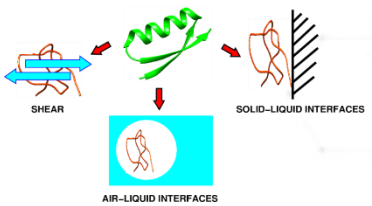
INDUCING AGGREGATION OF PROTEINS BY EXPOSURE TO DIFFERENT CONTROLLED STRESS FIELDS

REF. NO. 158

To dedicated students of **pharmacy**, **pharmaceutical technology, biotechnology** or related disciplines, we offer an opportunity to write a paid Master's thesis. The project is conducted in close cooperation with University of Graz, Takeda and Med Uni.

OBJECTIVE:

Biopharmaceuticals are having potential to become the core of pharmaceutical development. However, large scale manufacturing of bio-pharmaceuticals poses specific challenges for the drug formulation scientist. The entire process involves different steps, of which end step is final filling of product into vials. Maintaining the protein physical and chemical stability can be a complex task, as proteins are large molecules and sensitive to variations of process and environmental conditions. While formulation scientists are tirelessly trying to stabilize protein formulations to withstand production process, in the course of this thesis, we are aiming to do the opposite. We will, in a systematic way, induce a number of stress conditions which simulate production processes (pumping, stirring, filtration, etc.) on the given protein formulation and further investigate how the protein formulation reacts to these stresses. Using available characterization techniques as Micro Fluid Imaging (MFI), Dynamic Light Scattering (DLS) etc., we will be exploring the extent of aggregation formed in given liquid protein formulation.



WITHIN THE FRAMEWORK OF THIS 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 University of Graz
- Assistance with the publication of results

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.

Contact:
Research Center Pharmaceutical Engineering GmbH
Inffeldgasse 13, A-8010 Graz
Sandra Sünkel
Head of Human Resources
email: sandra.suenkel@rcpe.at - Tel.: +43 316 873 30904

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