

September 4th-8th, 2023

Department of Pharmacy, University of Copenhagen (UCPH)

Copenhagen, Denmark

Aim of the visit to UCPH

We commonly study the link between obesity and chronic kidney disease in different models, including mice, rats and swine kidney samples but also samples from patients affected by metabolic syndrome and diabetes. Considering that lipids play a pivotal role in the development of chronic kidney disease, investigating the lipid turnover in kidney samples from obese animals may provide a deeper understanding of the pathogenesis. In line with this, state-of-the-art Lipidomics methods established at the UCPH and the Danish Cancer Institute can provide unique insights into this disease and hence, strongly contribute to the DOKI project. This is a pilot test to evaluate the feasibility of sending samples to Denmark in order to be analysed through these methods.

List of activities:

- **Monday 4:** we collected from Rigshospitalet kidney samples from mice. These samples belong to an experiment that we performed in Tenerife prior being sent to Denmark. Cryosectioning was performed at Department of Pharmacy, UCPH, the samples were stored. Kidney samples were also delivered to Dr. Mesut Bilgin, head of the Lipidomics Core Facility at the Danish Cancer Institute, as they will be subjected to Shotgun lipidomics analyses as well.
- **Tuesday 5:** first testing of Desorption Electro-Flow Focusing Imaging (DEFFI) and method optimization for kidney sample analyses.



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- **Wednesday 6:** first attempt to acquire an image of kidney samples by DEFFI and further method optimization, including adequate software installation.
- **Thursday 7:** kidney sample analysis in positive mode. Preliminary data analysis was performed.
- **Friday 8:** kidney sample analysis in negative mode. Preliminary data analysis was performed as well as the hematoxylin/eosin staining of the samples to compare optical images to DEFFI images.

