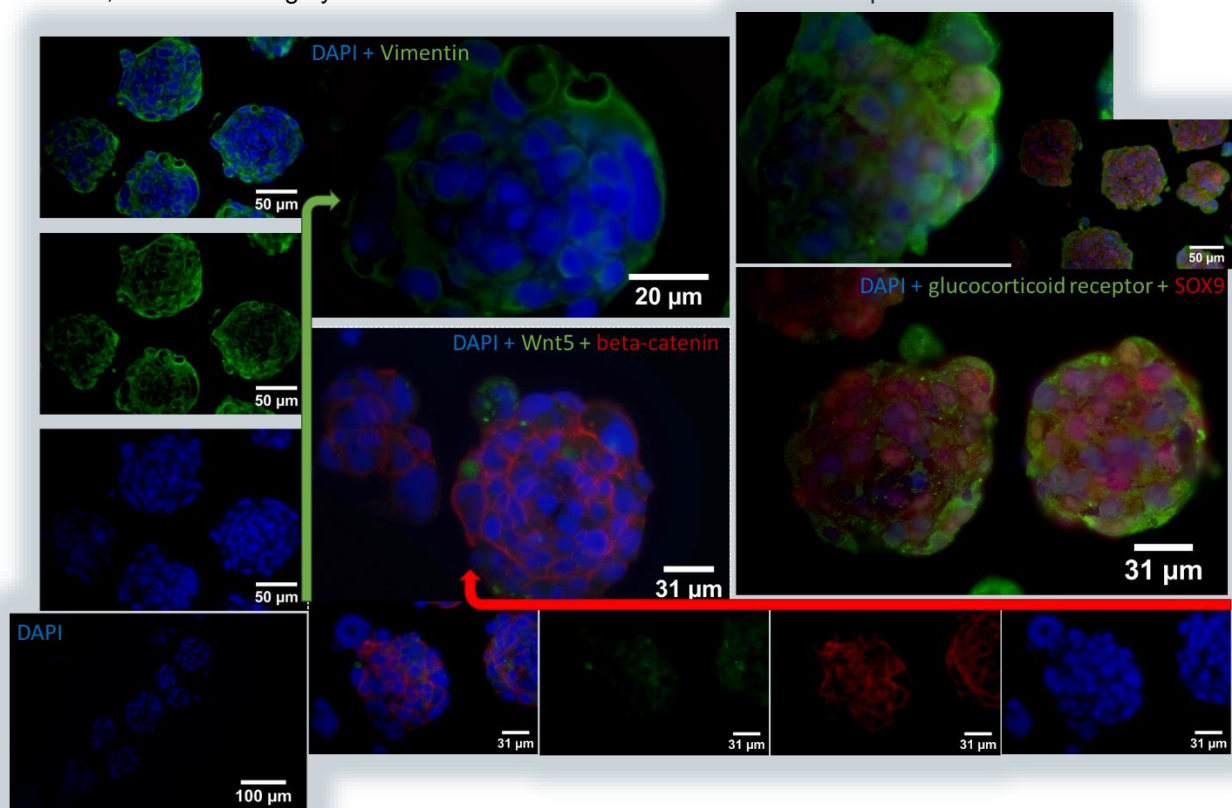# MSc theses
Hantel Group – University Hospital and University of Zürich
Clinic for Endocrinology, Diabetology and Clinical Nutrition

Our lab provides world-leading expertise in modelling of the adrenal gland and endocrine tumors and we are looking for highly motivated Master students to realize exciting in vitro 3D-modelling projects! In specific, we focus on adrenocortical carcinoma, a highly aggressive malignancy, for which frequently observed drug resistance could be related to common alterations such as in Wnt/β-catenin signaling, stem cell properties and related cellular plasticities. Recently, we have established a high-throughput 3D-modeling platform related to various endocrine diseases and aim now to uncover thereby highly relevant and dynamic cellular processes including drug-resistance mechanisms, metastasization, immune-crosstalk and to establish endocrine-disruptor screenings, among others. Therefore, we look forward, to welcome highly motivated master students to become active part of our lab!

We look for:

• Interest in cell biology, oncology, signaling pathways and particularly strong motivation!

• Critical thinking & scientific curiosity

• Good organizational skills, attention to details, reliability, and ability to work in a team

• Female, male, diverse – in particular we look for scientifically enthusiastic personalities!

You can choose your project from the following two arms (either/or):

• Investigation of drug-treated human adrenal tumor spheroids

• Investigation of endocrine-disruptor-treated healthy adrenal organoids

Of note, our group has been selected and is funded by the swiss 3R competence centre (3RCC https://swiss3rcc.org/). The Swiss 3R Competence Centre (3RCC) promotes the 3Rs principle (replacement, reduction and refinement of animal experimentation) among the scientific community and the public. To facilitate the development and implementation of effective 3R methods and improve animal welfare it challenges research paradigms and creates innovative alternatives to animal use. Your projects will be part of this vision and embedded in the 3RCC network. *(Picture Source 3RCC https://swiss3rcc.org/)*

If you like, find out more about applied models, methods and techniques:
https://www.nature.com/articles/s41419-022-05096-x, https://pubmed.ncbi.nlm.nih.gov/37760571/, https://www.mdpi.com/2673-396X/5/3/19, https://pubmed.ncbi.nlm.nih.gov/35563746/

Supervision:
The candidates will be supervised by Constanze Hantel (Head of the Research Laboratories of the Clinic of Endocrinology, Diabetology and Clinical Nutrition; MSc Biology, PhD Biomedicine, Habilitation in Experimental Medicine) and co-supervised by an experienced postdoctoral fellow Dr. Edlira Luca. Huguette Debaix and Igor Shapiro, two highly experienced technicians, will furthermore provide help in practical aspects and technical troubleshooting.

Start Date: Flexible, but we prefer as soon as possible

Contact: Constanze.Hantel@usz.ch