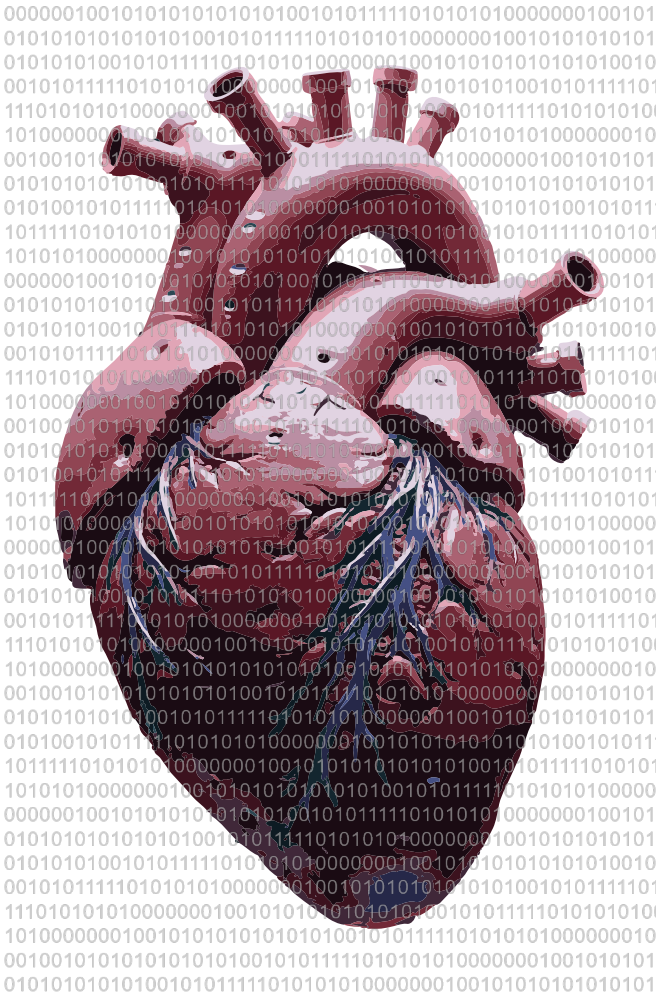
Master Thesis

The Lipidome of the Heart in Numbers

universität wien

Faculty of Chemistry
Department of Analytical Chemistry
Ahrends Lab



This thesis centers on the lipid composition of the heart cells and its critical role in heart diseases, particularly in conditions such as myocardial infarction (heart attack), thrombosis (clot formation), and hemostasis (bleeding control). Disruptions in lipid balance within the heart muscle are closely linked to global changes in lipid metabolism, which can also be observed in others cardiovascular events, including acute coronary syndrome and myocardial infection, as they contribute to inflammation and impair cell function. Advances in bioinformatics and lipidomic analysis now make it possible to not only investigate how lipids change, but also how they influence these processes. Understanding their identity and functional roles is paving the way for the discovery of new biomarkers and therapeutic targets for heart disease. In this thesis, you will develop skills in cutting-edge mass spectrometry techniques and bioinformatics tools to analyze lipid changes and their effects on heart health.

Start: Flexible, can begin at any time.
Duration: The project is designed to be completed in 6 months.

Additionally, there will be an opportunity to extend this research into a PhD thesis for those interested in deepening their expertise.

You are welcome to contact us for further information and to learn more about our lab. Together, we can discuss details and find a project tailored to your specific interests.

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https://lipidomics.at
https://ahrendslab.univie.ac.at

We provide an interdisciplinary research environment, offering the chance to learn a variety of methods in the field of lipidomics. If you are generally interested in the areas we focus on and enjoy experimental work, you should definitely get in touch with us.