



**HelmholtzZentrum münchen**  
German Research Center for Environmental Health

Visit to the metabolomics core facility at the Helmholtz Zentrum Munich, Germany 2-7.5.2011.

Metabolomics is an evolving field of the comprehensive measurement of ideally all endogenous metabolites in a biological fluid. Our hypothesis is that the identification and quantification of these low molecular weight molecules (e.g., lipids, amino acids, and sugars) will allow detailed definition of the mechanisms of hormonal diseases, such as endometriosis.

The metabolite analysis was initialized in Munich already in 2009 by screening 162 metabolites in 189 serum samples and 118 peritoneal fluid samples of endometriosis patients and healthy controls. The analyses were performed using targeted quantitative metabolomic profiling and Q-Trap mass spectrometer. The first results of Kendall correlation tests revealed metabolite level differences in phospholipid metabolism in endometriosis patients in peritoneal fluid.

The purpose of the visit is to finalize the data analysis for endometriosis metabolite screenings. The visit was useful, as large dataset require specific statistical techniques for normalization and outlier detection. The work done during the week resulted in a solid, corrected dataset that will be used for a manuscript that describes the effect of disease state and hormonal environment in peritoneal fluid and serum of endometriosis patients and healthy controls.

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Anni Vehmas

Turku Centre for Biotechnology  
University of Turku and Åbo Akademi University