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Medizin  
überregional**Germany's largest research programme for genome sequencing launched**

Cooperation agreement between Kühne-Stiftung, University Hospital Zurich (UHZ) and UKE signed. The Kühne-Stiftung is funding a large research project for whole genome sequencing in the German-language area with 12.5 million euros. The University Heart & Vascular Centre Hamburg is leading this ambitious project. Dr. Peter Tschentscher, the Mayor of the Free and Hanseatic City of Hamburg, Katharina Fegebank, Hamburg's Minister of Science, Prof. Dr. h.c. Klaus-Michael Kühne, Kühne Stiftung, and UKE representatives were present when the cooperation agreement between the Kühne-Stiftung, the University Hospital Zurich/Switzerland and the UKE was recently signed.

Cardiovascular diseases are caused by a complex interplay of environmental and genetic factors. So far, this complex interaction has not been sufficiently studied. In the context of this research project, the entire genomes of 9,000 individuals from the general population who were recruited in the Hamburg City Health Study as well as from cardiovascular patients of the UKE will be sequenced. The objective is to gain a better understanding of the causes of cardiovascular diseases in order to improve the understanding of cardiovascular disease and to develop new diagnostic and targeted therapeutic options.

Katharina Fegebank, Hamburg's Minister of Science, Research and Equal Opportunities: "This genome sequencing project is an important step toward the understanding and prevention of widespread diseases such as heart diseases. The project aims to improve the possibilities to cure patients through early detection and new therapeutic approaches. The innovative and interdisciplinary project also provides further evidence of the UKE's leading status in research and Hamburg's international standing as an attractive research hub. In particular, I would like to thank Michael Kühne and his foundation for their generous support of this project!"

Prof. Dr. h.c. Klaus-Michael Kühne, Chairman of the Kühne-Stiftung: "The Kühne-Stiftung is increasing its activities in medicine with this project. We look forward to expanding and strengthening our medical campus in Davos in cooperation with the UKE and the University Hospital Zurich. Therefore, with this new cardiovascular diseases project we are guided by the following motivation: we want to generate scientific insights, but our primary objective is to help people."

"We would like to thank the Kühne-Stiftung, and in particular its chairman Klaus-Michael Kühne, who has facilitated a pioneering project that will be of great importance for cardiovascular research and other areas of medical research. The data gained from human genome sequencing will enormously extend the scientific opportunities of the Hamburg City Health Study," said Prof. Dr. Uwe Koch-Gromus, Dean of Hamburg University's Medical Faculty and UKE board member.

The research endeavour commences on 1 October 2019. By the end of 2020 all 9,000 genomic samples will be sequenced, and the first results can be expected in the following year. "This project creates the unprecedented opportunity to conduct intensive research on the causes of cardiovascular diseases. We hope to improve current approaches on the early detection and therapy of cardiovascular disease as well as to establish new personalised

strategies for cardiovascular diseases,” said Prof. Dr. Stefan Blankenberg, Head of Medical Management at the UKE’s University Heart & Vascular Centre Hamburg.

Whole genome sequencing and bioinformatical analyses at three locations

The University Hospital Zurich/Switzerland participates in this research endeavour jointly with the UKE. The Zurich Hospital will perform the sequencing and conduct research on methodological issues of sequencing approaches. Subsequently, data processing and analyses will be performed by an expert group under the leadership of a newly established professorship for Clinical Cardiology with a focus on genetics and biomarker research at the UKE and a newly established professorship for bioinformatics at the location in Davos/Switzerland and at the UKE. The project is integrated into the strategic concept of the Kühne-Stiftung for the development of the Medical Campus Davos, where a Centre for Cardiovascular Precision Medicine (CPM) will be founded and jointly with the University Heart & Vascular Centre Hamburg will search to find new answers to the core questions of cardiovascular diseases.