Center for Cardiovascular
Genetics and Gene Diagnostics

MISSION STATEMENT

Center for Cardiovascular Genetics and Gene Diagnostics
Zentrum für Kardiovaskuläre Genetik und Gendiagnostik
Centre de Génétique Cardiovasculaire et Diagnostic Génétique

Center – The Center for Cardiovascular Genetics and Gene Diagnostics is the first and only center in Switzerland specializing in molecular gene diagnostics and research of genetically caused aortic diseases and their clinical consequences, such as aortic aneurysms and dissections. Our competence is based on many years of experience in this field. Our excellence lies in the collaboration and joint interaction across the main activities of the center – research, teaching, gene diagnostics, and interdisciplinary counseling – in order to support and further each other's goals.

Research – Our research focuses on the understanding of the molecular basis and the pathogenesis of aortic aneurysms and related diseases. Our goal is not only to find genetic causes but also to explore new therapeutic approaches according to the motto «*from knowledge will come a cure*». Furthermore, we develop and establish new molecular genetic methods and always use state-of-the-art technologies and science. The findings of our research are published in international scientific journals, communicated to students, and applied in gene diagnostics. The research of the center is supported by the Swiss National Science Foundation (SNSF) and other foundations.

Teaching – In the field of medical molecular genetics we are involved in university teaching and in laboratory medicine training (*Foederatio Analyticorum Medicinalium Helveticorum*, FAMH). Thereby we impart specialized and methodological knowledge both theoretically and practically. Moreover, we offer and supervise selected Master's and PhD theses, which are integrated into our research.

Gene diagnostics – Our mission is to offer the best possible genetic testing and to find the disease-causing mutation in every patient referred to us. For this purpose, we use technologies which guarantee efficient and reliable mutation detection with the highest level of quality. Based on a disease-causing mutation we can offer legally permitted preimplantation or prenatal diagnostics as well as can clarify whether or not family members are affected (also presymptomatic). Furthermore, by genetic clarification we provide a basis for appropriate genetic counseling and targeted therapy (personalized medicine). We perform gene diagnostics according to the Swiss Federal Law on Human Genetic Analysis (LAGH – GUMG) with the permission of the Federal Office of Public Health (FOPH – BAG), thereby using available resources in the most specific and economical way. Unsolved and special cases of gene diagnostics are the subjects of our research.

Genetic counseling – Prior to and after genetic testing we offer an appropriate and mandatory genetic counseling to patients and their family members, explaining the expected or existing results of gene diagnostics as well as communicating the most current information on the disease analyzed.

Team – We consider our work as an open network among different institutions, disciplines, and national and international experts. We believe that cooperation based on mutual respect leads to fruitful synergies and hence to better outcomes.