Main objectives of the project

1. Exchange of knowhow and experience through bi-directional secondments of research staff between EGC-UT and two strategic partner organizations (UNIL-CIG and UH-FIMM);
2. To improve the connection between clinical community and genomic researchers through improving genetic and personalized medicine related knowledge of medical graduates and practicing clinicians;
3. To increase the soft skills (intellectual property, applying and managing of H2020 grants, science communication and commercialization) of staff in order to enhance the capacity of EGC-UT to translate research results into clinical practice;
4. To revise and elaborate a sustainable long-term development strategy for EGC-UT;
5. To increase the visibility of EGC-UT scientific excellence and the research potential of the institution.

Workpackages:

WP1 Management
WP2 Enhancement of research & innovation excellence of EGC-UT in the field of functional and statistical genomics
WP3 Building soft skills of EGC-UT staff
WP4 Improving genetic and personalized medicine related knowledge of medical graduates and practising clinicians
WP5 Strategic development and ensuring of long-term sustainability
WP6 Dissemination and outreach

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UH-FIMM is a research institute of the University of Helsinki. The research at FIMM focuses on human genomics and personalized medicine. FIMM integrates research groups working on molecular medicine research, Technology Centre and Biobanking Infrastructures and thereby promotes translational research and adoption of personalized medicine in health care.

Direct quantifiable impact on research and innovation excellence:
• Increase of peer-reviewed publications & citations
• New intellectual property
• Successful participation in new national & EU level research & innovation programmes
• New collaboration agreements with medical sector and businesses
• Academic and industrial partnerships
• New innovative products and services

Long-term impact:
• Improved understanding of biological pathways and processes
• Advances in risk prediction & stratified medicine
• Improved public health and cost-effectiveness due to early prevention
• Reduced health inequalities in society
• Increased level of European innovation & competitiveness
• Improved capacity and performance in population health research & innovation in Estonia

University of Tartu, Estonian Genome Center
(EGC-UT), Estonia - coordinating partner
www.biobank.ee
Project principal investigator: Prof. Andres Metspalu,
andres.metspalu@ut.ee.

EGC-UT is a research institute and one of the leading population-based biobanks in Europe that aims to promote the development of human genomics research, to find genetic determinants of complex diseases and implement the knowledge into medical practice with the purpose of improving public health in Estonia and acting as a developer of personalized medicine in Europe.

University of Lausanne, The Center for Integrative Genomics
(UNIL-CIG), Switzerland.
http://www.unil.ch/cig/home.html
The principal investigator: Alexandre Reymond,
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UNIL-CIG is an interdisciplinary research and training institute of the University of Lausanne. The research at CIG focuses on genome structure and function using different experimental and modeling systems.

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Partners
Research opportunities provided by the unique sources of EGC-UT Biobank, nation-wide Electronic Medical Records systems and the Estonian National Personal Medicine Pilot project can be effectively translated into improved understanding of disease etiopathologies and clinical benefit through early diagnosis, risk stratification, treatment and management. The ePerMed project is aimed at increasing the scientific excellence of EGC-UT in the fields of functional and statistical genomics of common and rare diseases by capitalizing on knowledge transfer from two internationally renowned partners in the field of human and medical genomics – UNIL-CIG in Switzerland and UH-FIMM in Finland.

Short introduction
Emerging personalized medicine initiatives have a potential to reduce healthcare costs and improve the overall health in European countries.

For upgrading the scientific expertise of EGC-UT researchers, knowledge and experience provided by two leading research institutes in the field of European human genetics – UNIL-CIG and UH-FIMM – will be exploited through staff exchange (36 PM), scientific conferences (5), training seminars (18) and soft skill workshops (3).

Efficient application of personalized medicine requires tight collaboration between clinicians and genomics researchers. In first order this could be achieved through improvement of knowledge in the field of genome-based medicine among clinicians and medical graduates. This aim will be targeted through training workshops (3), secondments of medical staff (6 PM) and a website that collects educational materials and guidelines related to genomic medicine.

The workshops targeted to clinical community focus on practical examples on the ways genomics could be implemented in health care. The main topics to be covered are: complex and mendelian diseases, as well as oncogenetics. Majority of the trainers are themselves practising clinicians.