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Project:
EATRIS-Plus – flagship in personalized medicine

Acronym: EATRIS-Plus
Financing: Horizon 2020
Project duration: January 2020 – December 2023
Coordinator: EATRIS ERIC (ang. European Advanced Translational Research InfraStructure in Medicine), Amsterdam, the Netherlands
Project manager at the Faculty of Pharmacy: Prof. Dr. Irena Mlinarič-Raščan

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See some more information about the project on the project website.

Project presentation:
In the context of Horizon 2020 the European infrastructure centre for translational medicine EATRIS has gained funding from the European Commission for the leading project EATRIS-Plus. Project is designed to strengthen capacity and provide innovative scientific tools to achieve the sustainability of the EATRIS programme in the field of personalised medicine.

The specific objectives of the project include: consolidating the capacity of the EATRIS centre in the field of personalised medicine to improve the functioning of academic institutions and industry and to enhance the integration of the EATRIS centre with large pharmaceutical companies; to strengthen the sustainable EATRIS financial model; to encourage stakeholders to actively integrate into infrastructure operations; and to extend the strategic partnership with research infrastructure. EATRIS-Plus will contribute to combining and exploiting the translational infrastructure capacity of academic institutions in the field of different "omic technologies" and provide access to data obtained through such modern technologies. The project will facilitate the resolution of global scientific and societal challenges in the field of personalised medicine.

The effective advancement of personalized medicine depends on the availability of validated biological markers. However, as our ability to recognize genetic variants associated with complex diseases increases, these do not fully reflect disease phenotypes and therefore a more precise understanding of molecular mechanisms is required. This realization justifies the importance of developing multi-ohm approaches. To implement such approaches, it is necessary to eliminate systemic bottlenecks that affect the field of biological markers:

- Poor level of technological and analytical coherence;
- Poor data management and compliance with FAIR principles (Findable, Accessible, Interoperable, and Reusable);
- Lack of understanding of the relationship between genomic biological markers and other molecular markers at the end of the chain (transcriptomic, proteomic, metabolic);
- Lack of reliable control reference values for these biological markers in healthy populations;
- Poor understanding of clinical needs, resulting in limited introduction into clinical practice.

One of our main goals is to systematically address these issues. The consortium seeks to provide a multi-set of tools to support cross-analysis and data integration in clinical samples. This tool contains:

- Consensus on standardization of SOPs for "omic technologies";
- Guidelines for "omic" analytical processes;
- Verified reference materials for analytical processes;
- Quality parameters for quality assessment;
- Data analysis tools and "FAIRification";
- Criteria for setting reference values in population cohorts;
- Troubleshooting guidelines;
- Access to the storage of multi-ohm reference values.

Omsk tools will be developed and tested on an already established cohort of 1,000 healthy individuals from the Czech Republic who have already undergone genomic sequencing. Data on this cohort of healthy individuals will be supplemented during the project by transcriptomic, proteomic and metabolic data. By providing such a tool, EATRIS-Plus will enable high-quality patient-centred research and accelerate the implementation of personalized solutions medicine. The project coordinator at the University of Pharmacy is Prof. Dr. Irena Mlinarič-Raščan.