

## Developing a multi-omic toolbox for personalised medicine



### Participants

|   |    |
|---|----|
| EATRIS-ERIC                             | NL |
| Palacký University Olomouc              | CZ |
| Madrid Health Service                   | ES |
| University of Helsinki                  | FI |
| Integrated Biobank Of Luxembourg        | LU |
| Radboud University Medical Center       | NL |
| University of Ljubljana                 | SI |
| Trinity College Dublin                  | IE |
| Riga Stradins University                | LV |
| Uppsala University                      | SE |
| Technical University of Munich          | DE |
| European Patients Forum                 | LU |
| Vall D'Hebron Research Institute        | ES |
| CEA-NeurATRIS                           | FR |
| Italian National Institute of Health    | IT |
| University Of Oslo                      | NO |
| BIOCAT                                  | ES |
| INFARMED                                | PT |
| Sofia University                        | BG |
| University of Zagreb School of Medicine | HR |



### Coordinator: EATRIS-ERIC: European Infrastructure for Translational Medicine



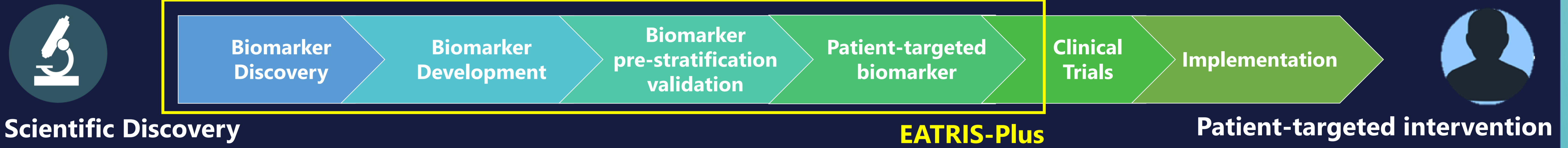
### Objectives

To enhance EATRIS' long-term sustainability by maturing key capacities of the infrastructure and offering access to scientific tools and services to support personalised medicine.

1. To provide access to infrastructure tools and resources, including novel academia-industry collaboration models
2. To further strengthen EATRIS' operational practices and financial performance
3. To drive patient empowerment through active involvement in the research process
4. To build lasting partnerships with key stakeholders in the translational medicine field to facilitate the progress of personalised medicine



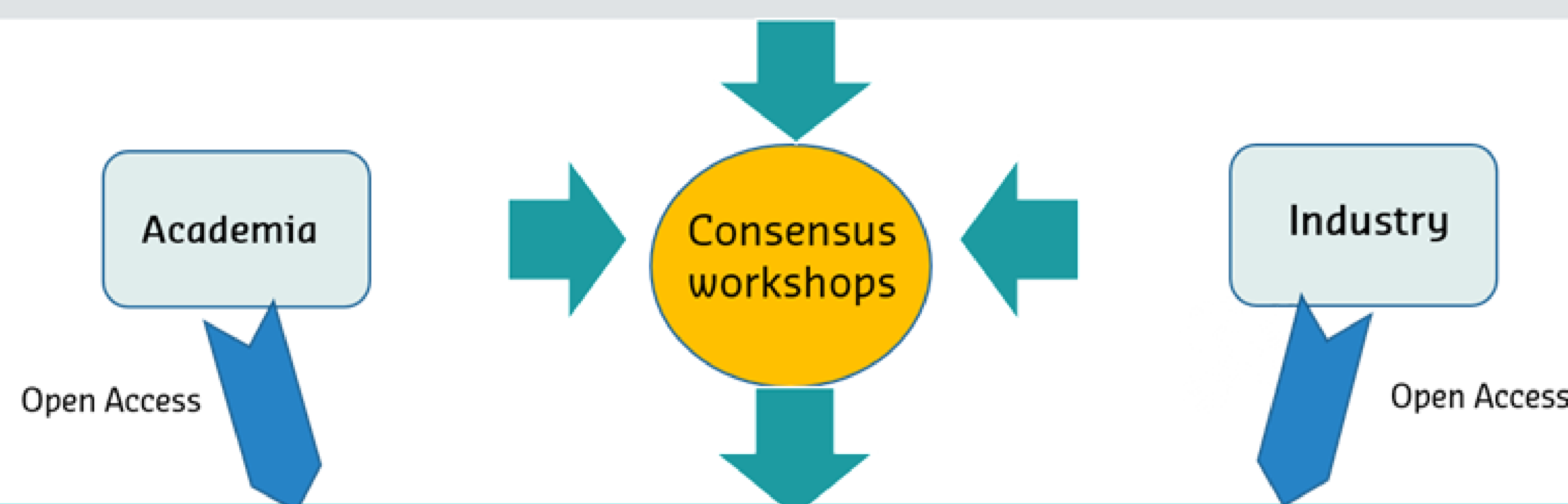
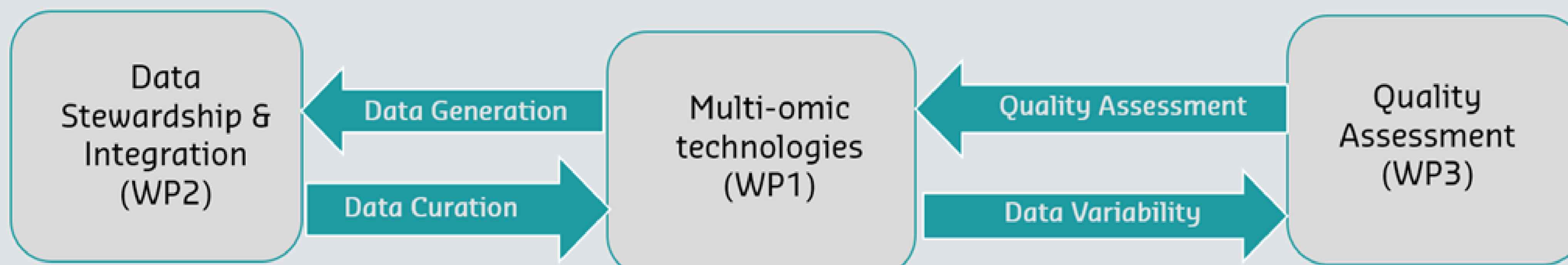
### Scientific Scope



### Activities Overview



### Scientific tools



### Multi-Omic Toolbox

- SOPs
- Guidelines for best practices
- Reference materials
- Quality parameters
- Analytical tools
- Criteria for reference values
- Troubleshooting guidelines
- Repository of multi-omic data

### Cohort



- Established cohort of **1,109 healthy individuals** in Czechia upon whom **genomic sequencing** has been already performed.
- **Biological material and specific consent are already available** to the EATRIS-Plus consortium for performing omic studies.
- Creation an **open repository** of reference values (age and gender stratified), **accessible to the research community as part of the multi-omic toolbox** and meant to grow with additional multi-omic data.

### Methods



- Genome Sequencing
- Epigenomic DNA methylation by Whole Genome Bisulfite Sequencing (WGBS) and/or DNA methylation array
- Transcriptomic RNA Sequencing
- MicroRNA sequencing
- Proteomic analysis
- Metabolomic analysis
- Data preprocessing analysis

### Workshops and training



#### Online training (e-courses, webinars)

- Addressing current challenges in translational medicine and personalised healthcare
- Targeted to junior and senior researchers and SMEs as well as patient experts
- Free of charge

#### Yearly EATRIS Summer School (5-days)

- First edition: June 14-18th 2021, virtual
- Aimed at academics, health care professionals and industry participants

#### Workshops Best Practices in Public-Private Collaboration

- Two-day workshop delivered in September 2021 and 2022
- Plenary lectures
- Team exercises on real-life cases