EATRIS Bulgaria

National Node Meeting
10 November 2023

EATRIS - New Initiatives and Projects in Translational Medicine

- **EATRIS –** introduction
- **Imaging & Tracing Platform** – Radiomics, EU Tracer Factory, Cell Tracking WG
- **EUCAIM** – The European Federation for cancer images
- **COST Action** proposals: LongCovid-NET and CELLxTrack
- **canSERV** Open Call
- **Hop-On Facility** Call (WIDERA)

Who we are

eatris

Facilities, resources and services to support cutting edge research

EATRIS countries

Bulgaria, Croatia, Czech Republic, Finland, France, Italy, Latvia, Luxembourg, Netherlands, Norway, Portugal, Slovenia, Spain, Sweden

150

Research Institutes

5 Scientific Platforms

- ATMPs
- Biomarker
- Imaging & Tracing
- Small Molecules
- Vaccine, inflammation and immune monitoring

Legal status

Non-profit, ERIC legal status

Examples of key actions

REPURPOSING OF MEDICINES 4ALL

GSK HUB

EUROPEAN JOINT PROGRAMME RARE DISEASES
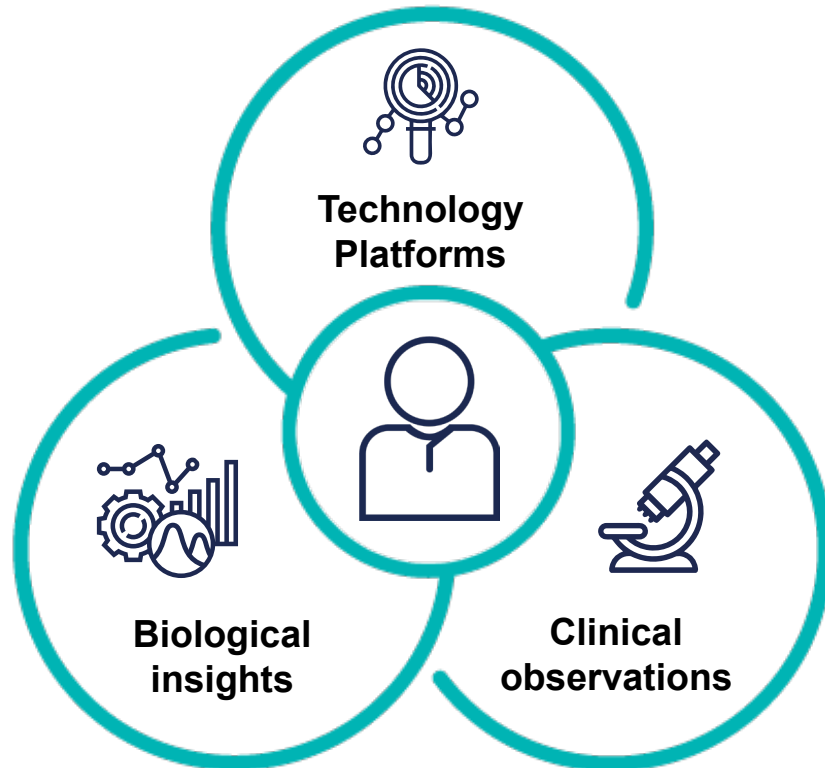
eatris+

Our mission

To accelerate the translation of research discoveries into patient benefit.

We **support, using our capacities and expertise** academia, industry, patients and policy makers.

Industry

Regulators

Academia

Clinicians

Patients

What do we do

Technology Platforms

Biological insights

Clinical observations

1. User access research and expert services

2. Develop new research tools

3. Provide education and training

4. Improve conditions for translation
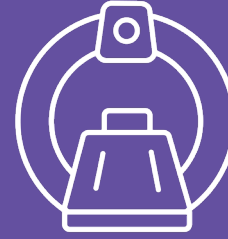
eatris

Five Scientific Platforms

eatris

ADVANCED THERAPY MEDICINAL PRODUCTS

Tissue engineering, Gene therapy, Cell therapy, GMP facilities

BIOMARKERS

Biobank facilities, Multiplexed immunostaining, Deep genome sequencing

IMAGING AND TRACING

(pre-clinical) PET imaging, GMP tracer development and production, (Ultra) high field MRI, Optical and hybrid imaging

SMALL MOLECULES

Advanced screening (also in 3D cultures), Development of xenograft and *in vivo* models, Drug (re-)formulation, (Pre-)clinical validation nanomedicines

VACCINE, INFLAMMATION AND IMMUNE MONITORING

Antigen characterisation, Vaccine formulation, Process development

EATRIS Platforms and Product Platform Chairs

eatris

ATMP

Giuliana Ferrari
HSR, IT

Maria Themeli
Amsterdam UMC, NL

Biomarkers

Alain van Gool
Radboudumc, NL

Laura Bermejo
IRYCIS, ES

Andreas Scherer
FIMM, FI

Small Molecules

Alfredo Budillon
INT Pascale, Naples, IT

Maddalena Fratelli
Istituto Mario Negri, IT

Vaccine, Inflammation & Immune Monitoring

Jan Langermans
BPRC, NL

Lucia Gabriele
ISS, IT

Coordination & Support

Martin de Kort
Small Molecules

Sara Zullino
Imaging & Tracing

David Morrow
ATMPs, VIIM

Emanuela Oldoni
Biomarkers

Imaging & Tracing

Bert Windhorst
VUMC, Amsterdam, NL

Imaging & Tracing

50 Academic Institutions and medical centres
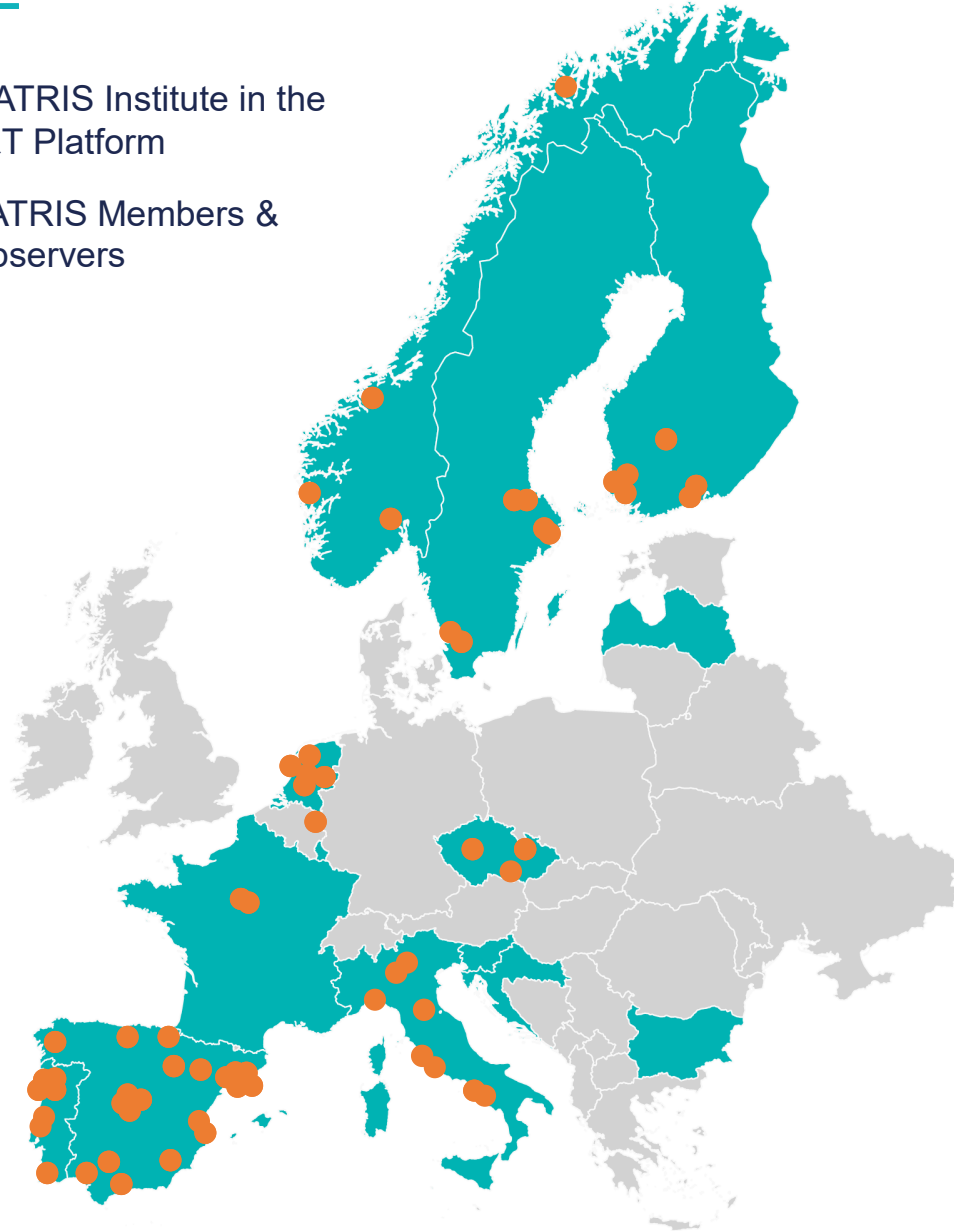
Chair
Bert Windhorst (AmsterdamUMC, NL)

Platform Manager
Sara Zullino (Scientific & SME Outreach Manager, EATRIS)

Imaging & Tracing Platform

EATRIS Institute in the I&T Platform

EATRIS Members & Observers

- 50 high-end molecular imaging facilities

- 75+ tracers for preclinical & clinical PET imaging

- GMP-compliant production & clinical development of novel tracers

- Manufacturing of disease specific tracers & radiolabeled drugs

- Multi-centre clinical trials

- Image acquisition, analysis & interpretation

Imaging & Tracing Platform – Working Groups

Luca Boldrini
Policlinico Gemelli
Rome (IT)

Wolfgang Weber
Technical University
of Munich (DE)

Nadja van Camp
Neuratris – CEA
Fontenay-aux-Roses (FR)

➢ **Radiomics**
- 16 institutions
- Challenges in radiomics application into clinical settings
- Data harmonization methods in multicenter studies (PET/MR imaging)
- Potential Use Case for EUCAIM

➢ **Cell Tracking**
- Combined EATRIS Plus & EATRIS Cell Tracking WG Symposium (2022)
- Connect EATRIS and the German translational medicine community
- Build a world-leading team of experts in cell tracking
- CELLxTrack COST Action (19 researchers from 11 EATRIS countries)

➢ **EU Tracer Factory**
- 6 institutions, 5 countries (FR, NL, IT, FI, SI)
- 6 radiotracers, 3 isotopes, different imaging applications and targets
- Community of practices in nuclear medicine & knowledge sharing
- Engagement with learned societies (ESRR, EANM)

Cancer Image Europe

- Research infrastructure for cancer images developed by the EU-funded **EUCAIM project**

  - Coordinated by EIBIR, scientifically led by Prof. Luis Martí-Bonmatí (HULAFE, Valencia/ES)

  - Consortium: 76 partners from 14 countries

  - Runtime: January 2023 - December 2026

  - Funding: €17.8m

- Flagship activity of the **European Cancer Imaging Initiative**

Vision and mission

Vision

Enhance cancer **diagnosis** and **treatment** through AI tools

Mission

- **Deploy a hybrid federated infrastructure** to power up AI & imaging to beat cancer

- Provide a research platform for the **development & benchmarking of AI tools** toward Precision Medicine

- **Address the fragmentation** of the existing cancer image repositories by building a distributed **Atlas of Cancer Images** *(>60m anonymised cancer images)* accessible to clinicians, researchers and innovators

- Create a federated data warehouse approach for deploying observational studies

Our Work Plan

AI models need a large amount of high-quality data.

Cancer Image Europe is **based on real-world achievements** and brings together 5 previously funded cancer imaging repositories, major European Infrastructures (Euro-BioImaging, BBMRI, EATRIS and ELIXIR) as well as industry representatives.

Work Packages	
1	Project management & coordination
2	Engagement & liaison of data providers
3	Ethical & legal aspects
4	Central hub governance & implementation
5	Data federation & interoperability
6	Federated data processing & analysis
7	Use cases for platform expansion & validation
8	Business & sustainability models

EUCAIM
CANCER IMAGE EUROPE

Use Cases and Platform Validation

- End-user involvement for use-case identification

- Consensus-based protocols & services

- Central, federated or hybrid approach for use cases

- Demonstrate platform usability & relevance, as well as benchmarking of AI tools

- **The platform will be open to new partners and providers through open challenges and open calls**
  → April/May 2024

Start with **21 clinical sites** from **12 countries**

Connect **≥30 data providers** from ≥15 countries by 2026

Co-funded by the European Union

CELLxTrack

- **CELLxTrack:** An Ecosystem to Track Cell and Gene Therapies
- Coordinated by Technical University of Munich (TUM, Germany)
- 19 researchers from 11 EATRIS countries
- **CELLxTrack** will create a forum of all relevant stakeholders to develop strategies to make trackable ATMPs a reality in Europe

Bulgaria

Prof Victoria Stepan Sarafian-Ozanian (Medical University-Plovdiv [Medical Biology])

Participating as Secondary Proposer

Core Expertise: Biological sciences: Molecular biology and interactions

Gender: F

Is Young Researcher and Innovator: No

CELLxTrack

eatris

Emerging needs

- Growing interest in ATMPs: Approval and success of ATMPs, market expansion, but high associated costs.

- Understanding disease mechanisms to improve effectiveness: Need for novel imaging tools for biodistribution and viability studies, as well as preclinical models.

- Advancements in medical imaging: Enhanced sensitivity and spatial resolution (e.g., whole-body PET imaging) allowing the imaging of small cell populations.

LongCOVID-NET

eatris
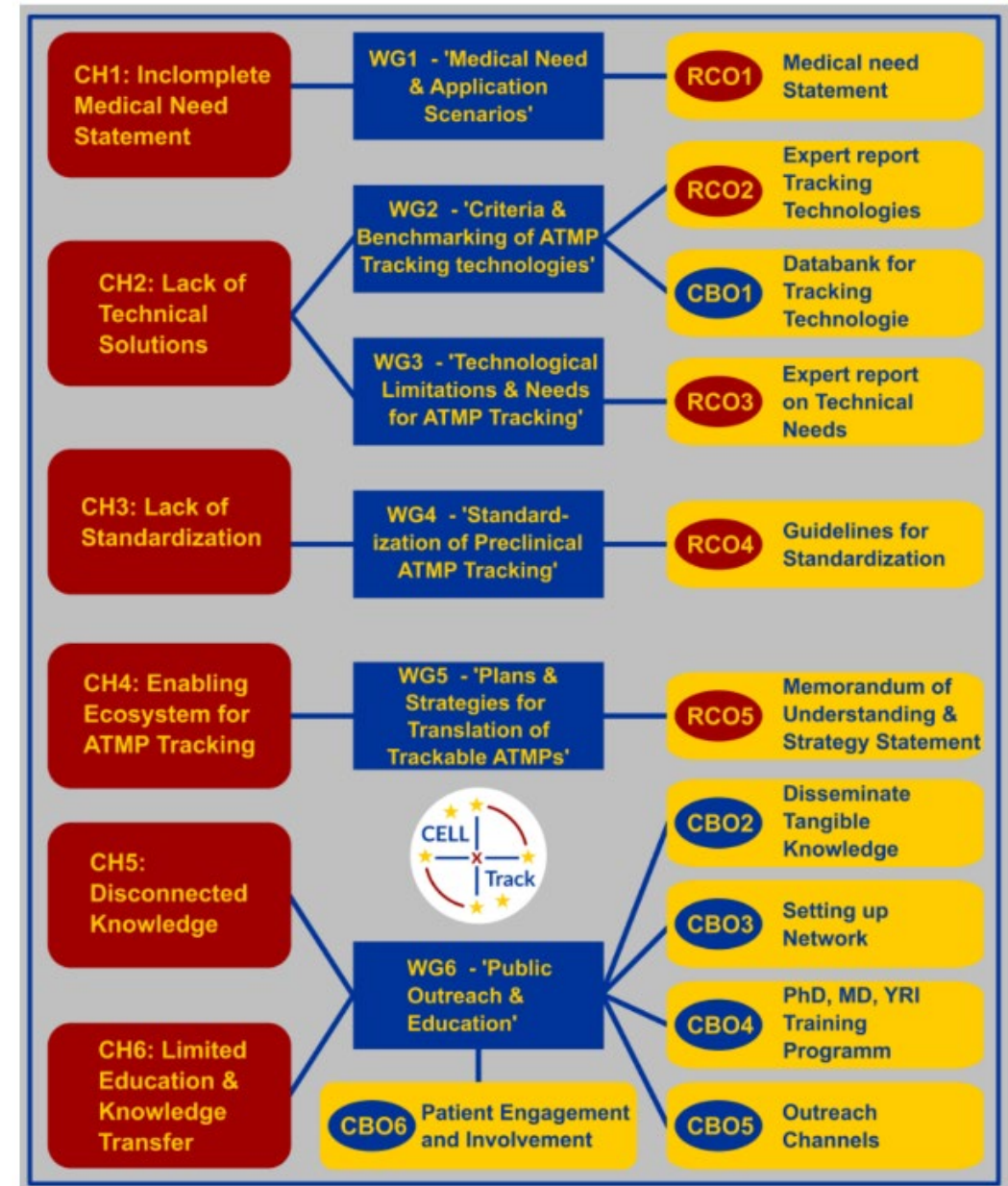
Title: A network for clinical definition, stratification and prevention of Long Covid

cost
EUROPEAN COOPERATION
IN SCIENCE & TECHNOLOGY

Acronym: LongCOVID-NET

Aim: The LongCOVID-Net aims at connecting experts from different fields into an international Network focusing on Long-Covid, a new debilitating disease with unknown aetiology, clinical variability, and lack of diagnostic biomarkers and treatments.

- 22 researchers from 8 EATRIS countries
- Coordinated by Institute for Health Science Research Germans Trias i Pujol (IGTP, Spain)

Bulgaria
Prof Evelina Shikova-Lekova (Genetic Medico-Diagnostic Laboratory "Genica" Ltd , Sofia, Bulgaria)
Participating as Secondary Proposer
Core Expertise: Basic medicine: Virology

Prof Dora Aleksandrova (SPECIALIZED HOSPITAL FOR ACTIVE TREATMENT OF HEMATOLOGICAL DISEASES [Laboratory of Virology])
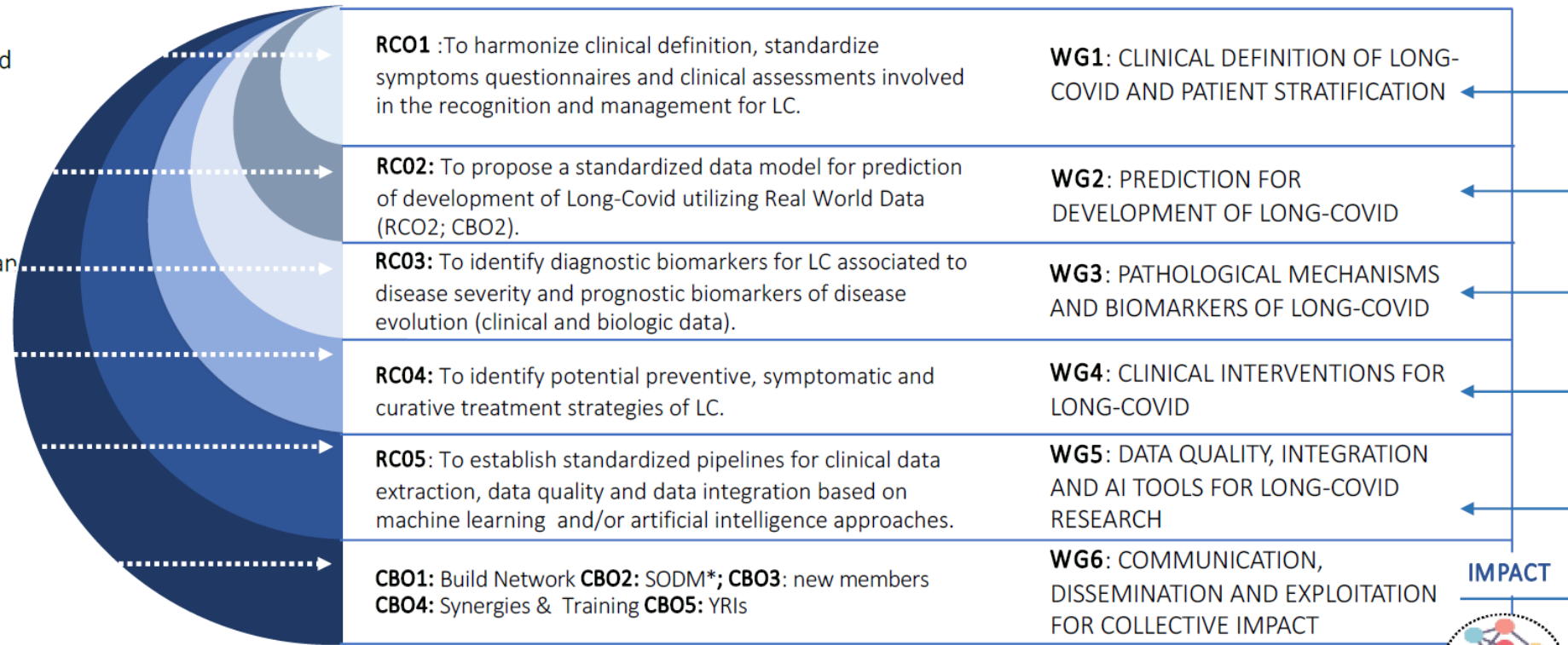Participating as Secondary Proposer
Core Expertise: Clinical medicine: Virology

LongCOVID-NET

eatris

cost
EUROPEAN COOPERATION
IN SCIENCE & TECHNOLOGY

Challenges for Long-Covid

Objectives for Long-Covid

Implementation

1. Missing recognition and a precise harmonized clinical definition.

2. Missing prediction models based on epidemiological, and biological parameters

3. Missing biomarkers for diagnostics rather than biomarkers on exclusion from other conditions.

4. Missing data on therapeutic approaches for prevention, management and cure and prognostic biomarkers

5. Missing standardized protocols, AI/ML integrative tools for Long-Covid

6. No patient-centred system for management and research.

RCO1 :To harmonize clinical definition, standardize symptoms questionnaires and clinical assessments involved in the recognition and management for LC.

RC02: To propose a standardized data model for prediction of development of Long-Covid utilizing Real World Data (RCO2; CBO2).

RC03: To identify diagnostic biomarkers for LC associated to disease severity and prognostic biomarkers of disease evolution (clinical and biologic data).

RC04: To identify potential preventive, symptomatic and curative treatment strategies of LC.

RC05: To establish standardized pipelines for clinical data extraction, data quality and data integration based on machine learning and/or artificial intelligence approaches.

CBO1: Build Network **CBO2:** SODM*; **CBO3:** new members **CBO4:** Synergies & Training **CBO5:** YRIs

WG1: CLINICAL DEFINITION OF LONG-COVID AND PATIENT STRATIFICATION

WG2: PREDICTION FOR DEVELOPMENT OF LONG-COVID

WG3: PATHOLOGICAL MECHANISMS AND BIOMARKERS OF LONG-COVID

WG4: CLINICAL INTERVENTIONS FOR LONG-COVID

WG5: DATA QUALITY, INTEGRATION AND AI TOOLS FOR LONG-COVID RESEARCH

WG6: COMMUNICATION, DISSEMINATION AND EXPLOITATION FOR COLLECTIVE IMPACT

IMPACT

SODM: System-oriented dialogue model

Providing Cutting Edge Cancer Research Services Across Europe

canSERV
providing cutting edge
cancer research services
across europe

Free services for researchers

BBMRI-ERIC® · EURO BIOIMAGING · elixir · ARTTIC · instruct ERIC · EORTC *The future of cancer therapy* · ecrin · TTOPSTART · eatris · ARIE

IBISBA·EU · EuroPDX *Research Infrastructure* · eu::openscreen · International Agency Research on Cancer *World Health Organization* · INFRAFRONTIER *modelling human diseases* · EMBRC EUROPEAN MARINE BIOLOGICAL RESOURCE CENTRE · MIRRI ERIC · Cancer Core Europe · European Cancer Patient Coalition

Facts & Figures

19 Consortium Partners | 13 Research Infrastructures
150+ Service providers
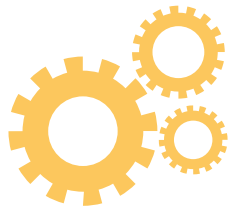
Catalogue of 400+ Services in 10 Research Fields

eatris { 22 Service Providers
         64 Services

Funding: 14.8 Mi € Horizon Europe
10 Mill.€ Transnational Access Budget

1 Sept 2022 – 31 Aug 2025

Open Calls

1st Call → 28 Feb to 25 May 2023

- *41 proposals received*
- *32 proposals passed to scientific review – (approval in progress)*
- *Services implementation should start end Nov-Dec 2023*

NOW OPEN
2nd Call → 12 Oct 2023 to 4 Jan 2024

Single application platform

www.canserv.eu

Questions

EATRIS TNA Coordinator

Patricia Carvajal, PhD

patriciacarvajal@eatris.eu

calls@canserv.eu

Twinning (Bottom up)

- building on potential of **networking for excellence** through knowledge transfer and exchange of best practices

- research institutions of the Widening countries act as co-ordinators, "twinning" with top-class leading counterparts in EU

- Next calls in 2025

Hop-on Facility

- **increases visibility, enlarges outreach, access to new talent pools**

- allows research institutions from Widening countries to join **already ongoing R&I actions** under HE Pillar 2 and EIC Pathfinder.

- Main selection criteria are **excellence** and **added value**

- Next Deadline: 26 Sep 2024

HORIZON EUROPE - Hop on Facility

Work Programme 2023-2024 <u>11. Widening participation and strengthening the European Research Area</u>

Projects running at EATRIS that might be explored for Hop-on facility call in 2024

Project	Call	Type of action
HEAL HLA-homozygous iPSC-cardiomyocytE Aggregate manufacturing technoLogies for allogenic cell therapy to the heart	HORIZON-HLTH-2021-TOOL-06	RIA

➤ You can only "hop-on" to projects that do not already have consortium partners from (any) widening countries

➤ Full indicative list on EC F&T Portal (over 300 projects from Pillar 2 or EIC Pathfinder)
https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/horizon/hop-on

➤ Minimum duration of the hop-on participation of 18 months (to achieve the intended impacts)

eatris

European infrastructure for translational medicine

HORIZON EUROPE - Hop on Facility

Work Programme 2023-2024 [11. Widening participation and strengthening the European Research Area](#)

Call name: Hop on Facility
Funding programme: HORIZON EUROPE 2023-2024
Opening: 10 Jan 2023
Deadline: 26 Sep 2024
Budget (EU contribution): 100,000 to 600,000 EUR
Overall indicative budget: 40Mi EUR (2024)

Aim of the call: to scheme aims to **improve the inclusiveness of Horizon Europe by involving more research institutions from Widening countries*** under Horizon Europe Pillar 2** and EIC Pathfinder actions.

- Main selection criteria are **excellence** and **added value** of the new partner performing a relevant additional task in the project.

  Applications must demonstrate the R&I added value of the new partner and present a visible and distinct work package for the acceding partner.

  The proposal should include a detailed description of the profile of the new partner and its role in the existing project.

  The additional partner and task should be presented in a dedicated proposal template with the Description of the Action (DOA) of the ongoing action uploaded as an annex.

- All consortium partners need to **agree on the accession of the new partner** whereas the R&I relevance and complementarity needs to be demonstrated.

  The integration of an additional participant from a Widening country will happen on a voluntary basis without affecting the freedom of choice for the consortium and the principle of excellence

- The accepted application will trigger a **GA amendment** with the service in charge of the related topic

  Selected consortia will be invited to submit an amendment request for accession of a new partner, modification of the description of the action and **upgrade of the budget**.

  The budget increase must be exclusively for the benefit of the new partner with the exception of a **coordination fee of up to 10%** of the increased budget to be allocated to the coordinator of the consortium.

The member states which are **Widening countries are: Bulgaria, Croatia, Cyprus, Czechia, Estonia, Greece, Hungary, Latvia, Lithuania, Malta, Poland, Portugal, Romania, Slovakia and Slovenia. The Associated countries which are Widening countries are: Albania, Armenia, Bosnia and Herzegovina, Faroe Islands, Georgia, Kosovo, Moldova, Montenegro, Morocco, North Macedonia, Serbia, Tunisia, Turkey, Ukraine.*
*The **Outermost Regions** are: Guadeloupe, French Guiana, Martinique, Réunion, Mayotte Saint-Martin, The Azores, Madeira, Canary Islands.*

*****Clusters**: Health, Culture Creativity and Inclusive Society, Civil Security for Society, Digital Industry & Space, Climate, Energy & Mobility, and Food, Bioeconomy, Natural Resources, Agriculture & Environment.*

Expected outcomes:

- At system level, it mobilises excellence in the Widening countries, **increases visibility of the participants from the Widening countries**, improves knowledge circulation, and **reduces lack of participation** of the Widening countries in specific thematic domains;

- At organisation level, it opens up silos of established closed consortia, improves research excellence of the Widening country's institutions in specific fields, **enlarges outreach of the participants' R&I actions** and **provides access to new talent pools**;

- At the level of the beneficiary, new competencies and skills for working in transnational projects including **research management** and **dissemination** and **exploitation** are acquired

Evaluation:

- The proposal will be evaluated by independent experts focusing on the added value of the new partner and the work-package(s) or task(s) assigned to this institution in the context of the ongoing project.

- The ongoing project as such is not subject of the evaluation.

- In case of proposals receiving equal score in the ranking procedure, a preference will be given to those proposals with a particular relevance to green or digital transitions of the economy.

New calls in 2025

Call name: Twinning Bottom-Up
Funding programme: HORIZON EUROPE 2023-2024
Opening: 25 Apr 2023
Deadline(s): 28 Sep 2023
Budget (EU contribution): 800,00 to 1,500,000 EUR
Overall indicative budget: 113.00M EUR

Aim of the call:

- to **enhance networking activities between the research institutions of the Widening countries acting as co-ordinators and top-class leading counterparts at European Union level** by linking it with at least two research institutions from two different Member States or Associated Countries.

- to help **raise the research profile** of the institution from the Widening country as well as the research profile of its staff including a special focus on strengthening the research management and administrative skills of the coordination institution from the Widening country.

- proposals should have to **clearly outline the scientific strategy** for stepping up and stimulating scientific excellence and innovation capacity in a defined area of research and innovation as well as the scientific quality of the partners involved in the twinning exercise (including a comprehensive set of activities to be supported: short-term staff exchanges; expert visits and short term on-site or virtual training; workshops; conference attendance; organisation of joint summer school type activities; dissemination and outreach activities).

- proposals should also **focus on strengthening the research management and administration skills** of the coordinating institution from the Widening country. This should take the form of a dedicated work package or task, placing emphasis to specific activities, in view of helping the staff of the coordinating institution to improve their proposal preparation and project management/administration skills. This will be achieved by fully utilising the experience and best practices of the internationally leading partners and is expected to be a concrete deliverable of the Twinning exercise (the research part of the project should be presented through a dedicated work package and plan including the scientific objectives, tasks and roles of the partners)

- proposals should illustrate quantitatively and qualitatively the expected potential **impact** of the twinning exercise within the coordinating institution based on indicators (e.g. expected future publications in peer reviewed journals, collaboration agreements with businesses, intellectual property, new innovative products or services)

- Expected outcomes:

  - Improved excellence capacity and resources in Widening countries enabling to **close the still apparent research and innovation gap** within the European Union;

  - Enhanced **strategic networking activities** between the research institutions of the Widening countries and at least two internationally-leading counterparts at European Union level;

  - **Raised reputation, research profile and attractiveness** of the coordinating institution from the Widening country and the research profile of its staff;

  - **Strengthened research management capacities and administrative skills** of the staff working in institutions from the Widening country;

  - Improved **creativity** supported by development of new approaches in Research and Innovation collaboration, increased mobility (inwards and outwards) of qualified scientists.

- Remarks

  - If not yet in place, setting up/upgrading a research management/administration unit within the coordinating institution would be beneficial. This will be achieved by fully utilising the experience and best practices of the internationally leading partners and is expected to be a concrete deliverable of the Twinning exercise.

  - A **research/innovation component not exceeding 30%** of the total Horizon Europe grant may include a research / innovation project.

  - At least **50% of the budget for the research/innovation component must be allocated to the coordinator**. This will open opportunities for integrating smaller research / innovation activities and by this strengthening the commitment and the engagement of the twinning partners.

  - Specific attention should be paid to **gender equality objectives**, in line with the organisations' commitments through their adopted gender equality plans

  - The duration of the Twinning project should be up to **3 years**.

Training for early-career researchers

eatris

Summer School
In Cell and Gene
Therapies
(ATMPs)

TMex course on
translational
research and
transversal skills

TMex
TRAINING IN TRANSLATIONAL RESEARCH

Open Learning
Environment

eatris.eu/**transmed-academy**

eatris
Open
e-learning
platform

transmed academy

With thanks to our funders and partners

eatris

Republic of Bulgaria Ministry of Education and Science	**Republic of Croatia** Ministry of Science and Education

Republic of Bulgaria
Ministry of Education and Science

Republic of Croatia
Ministry of Science and Education

Czech Republic
Ministry of Education, Youth & Sports

Republic of Finland
Ministry of Education and Culture (OKM)

French Republic
Commissariat à l'Energie Atomique et aux Energies Alternatives (CEA)

Italian Republic
Istituto Superiore di Sanità (ISS)

Republic of Latvia
Ministry of Education and Science

Kingdom of Luxembourg
Le Gouvernement du grand-duché de Luxembourg

Kingdom of the Netherlands
ZonMW

Kingdom of Norway
Research Council of Norway*

Kingdom of Norway
University of Oslo*

Republic of Portugal
INFARMED-National Authority of Medicines and Health Products

Republic of Slovenia
Ministry of Education, Science and Sport

Kingdom of Spain
Instituto de Salud 'Carlos III' (ISCIII)

Kingdom of Sweden
Vetenskapsrådet**

Kingdom of Sweden
Vinnova**

The Swedish contribution is from Vinnova