

## H2020 PROJECTS FUNDED AT THE UNIVERSITY OF PADOVA

## ELIXIR-CONVERGE - Connect and align ELIXIR Nodes to deliver sustainable FAIR life-science data

ELIXIR is an infrastructure that enables life science organisations across Europe to store and share their research data. In its initial phase, ELIXIR focussed on the coordination and delivery of bioinformatics services from national Nodes. The EU-funded ELIXIR-CONVERGE project now aims to build on this foundation by providing local support for data management across Europe. This will be based on the development of a toolkit that helps researchers conduct data life cycle management according to international standards. The data management toolkit will be developed and tested by research projects from a range of life sciences domains to ensure it is fit for use by as broad a range of life scientists as possible. These domains include plant sciences, epitranscriptomics, marine metagenomics, human genomics, toxicology and biomolecular simulation.

The diversity, complexity and volume, as well as privacy and regulatory considerations, necessitate a collaborative and federated approach to life-science data. For scientists to find and share data across Europe and world-wide, ELIXIR needs to continuously develop and connect its services. The international ecosystem provided by ELIXIR – with 220 institutes in 23 Nodes, connecting hundreds of bioinformatics services – is globally unique and a competitive advantage for European research. Through our national Nodes ELIXIR has the geographical spread, service portfolio and expertise to fulfil our ambition that every European project uses FAIR data based on common standards, tools and services.

The initial operational phase of ELIXIR, supported by the H2020 ELIXIR-EXCELERATE project, focussed on the coordination and delivery of bioinformatics services from national Nodes. This lay the foundation for a coordinated European infrastructure. ELIXIR-CONVERGE will build on these achievements to deliver another critical component: the provisioning, across Europe, of distributed local support for data management based on a toolkit for researchers that enables lifecycle management for their research data according to international standards.

ELIXIR-CONVERGE will develop the national operations of such a distributed research infrastructure to drive good data management, reproducibility and reuse in a heterogeneous funding landscape. Over 36 months and with partners from our 23 Nodes, ELIXIR-CONVERGE takes the next step to realise a European data federation where interconnected national operations, strategically managed via national research infrastructure roadmaps, allow users to extract knowledge from life science's large, diverse and distributed datasets. By connecting ELIXIR Nodes to provide FAIR data management as a service, ELIXIR-CONVERGE will build national capacity and create a blueprint for operating sustainable Nodes in distributed research infrastructures.

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