



"Be at the forefront of transformative advancements in personalized medicine, sustainable agriculture, biotechnology innovations, and environmental preservation."



ELIXIR-IT's strategy aims to enhance industry engagement by providing quality resources and supporting open innovation in Europe's SMEs. It aims at developing solid partnerships, improving industry innovation, and meeting the bioinformatics training needs of the industry.



DATA FOR LIFE



CNR



Led by the National Research Council (CNR) and including 31 high-profile members in its network, ELIXIR-IT promotes the coordination and delivery of bioinformatics resources and tools at the national level.



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ELIXIR-IT is the Italian Node of **ELIXIR**, the European life science infrastructure, supporting basic and translational research by providing bioinformatics services and facilitating access to data in the field of biological sciences.



ELIXIR-IT includes several thematic communities and **six operational Platforms**: **Compute, Data, Interoperability, Omics, Tools, and Training**.



The Compute platform offers specialized and customizable bioinformatics analysis services such as workflow managers and advanced tools, partnering with technological partners.

- **Collaboration with ReCaS-Bari and CINECA for computation and storage services**
- **In-cloud Laniakea platform for on-demand workflow management systems**
- **IaaS and PaaS platform at ReCaS-Bari to host and deploy bioinformatics tools and services**



The Data platform facilitates access to a collection of databases by promoting the principles of open science, implementing the FAIR principles and therefore promoting access to large quantities of data through which companies can develop applications, products, and services for their customers.

- **Databases for proteomics, genomics, transcriptomics, molecular interactions and metabolomics curated by experts**
- **Extensive expertise in managing omic data**
- **Expertise in data curation and FAIRification**



The Interoperability platform focuses on services related to standardization and transparent access to extensive research data, enacting internationally recognized FAIR principles, and promoting life science communities to adopt standardized formats and identifiers.

- **Implementation of FAIR principles for data management**
- **Best practices and guidelines for data interoperability**
- **Development of protocols and ontologies for data integration**



The Omics platform provides services for omic data generation, focusing on massive nucleic acids sequencing and high-throughput characterization of metabolomes and proteomes.

- **Whole genome, exome and transcriptome sequencing**
- **Single-cell genome and transcriptome sequencing also at spatial resolution**
- **Microbiome analysis through metagenomics and DNA metabarcoding sequencing**
- **Optical mapping of chromosomes**
- **Epigenetic analysis**
- **Metabolomics and proteomics analysis**



The Tools platform provides software, workflows and libraries for omic and molecular data analysis. It provides reliable, expert-developed, optimized, reproducible bioinformatics software for biological and biomedical data analysis.

- **Characterization and integration of omic data**
- **Automation of omic data analysis workflows**
- **Standardisation and optimisation of analysis tools**



The Training Platform is specialized in delivering tailored, practical training designed to meet the diverse needs of business and industry. By integrating multi-platform expertise, it offers courses delivered by international experts, ensuring a high-quality learning experience.

- **Customized Training**
- **Theoretical and Practical Courses**
- **Highly Qualified International Instructors**