



Consiglio Nazionale  
delle Ricerche



EOSC-Life

# Open Science e Covid-19

## Collaborare per contrastare la pandemia

### WEBINAR:

Covid-19 e condivisione dei dati: perché in Italia  
si fa troppo poco?

16 novembre 2020 | ore 15:00



This event was partially funded by the European Commission under the H2020 programme. ELIXIR-CONVERGE: GA 871075  
EOSC-Life - GA 824087 | EOSC-Pillar: GA 857650 | OpenAIRE Advance: GA 777541 | RDA Europe 4.0: GA 777388





# Open Science e Covid-19

Collaborare per contrastare la pandemia



- Webinar: **Covid-19 e condivisione dei dati**: Il problema dei dati epidemiologici
- Webinar: **Covid-19 e condivisione dei dati**: Risorse e strumenti per i dati clinici
- Tutorial: **Covid-19 e condivisione dei dati**: Come gestire i dati omici - prima e seconda parte
- Tutorial: **Covid-19 e condivisione del software**: Protocolli e altri strumenti per l'analisi di dati



# Open Science e Covid-19

Collaborare per contrastare la pandemia



**Emma Lazzeri**

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EOSC-Pillar Training  
Coordinator

**Gina Pavone**

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OpenAIRE NOAD  
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**Francesca De Leo**

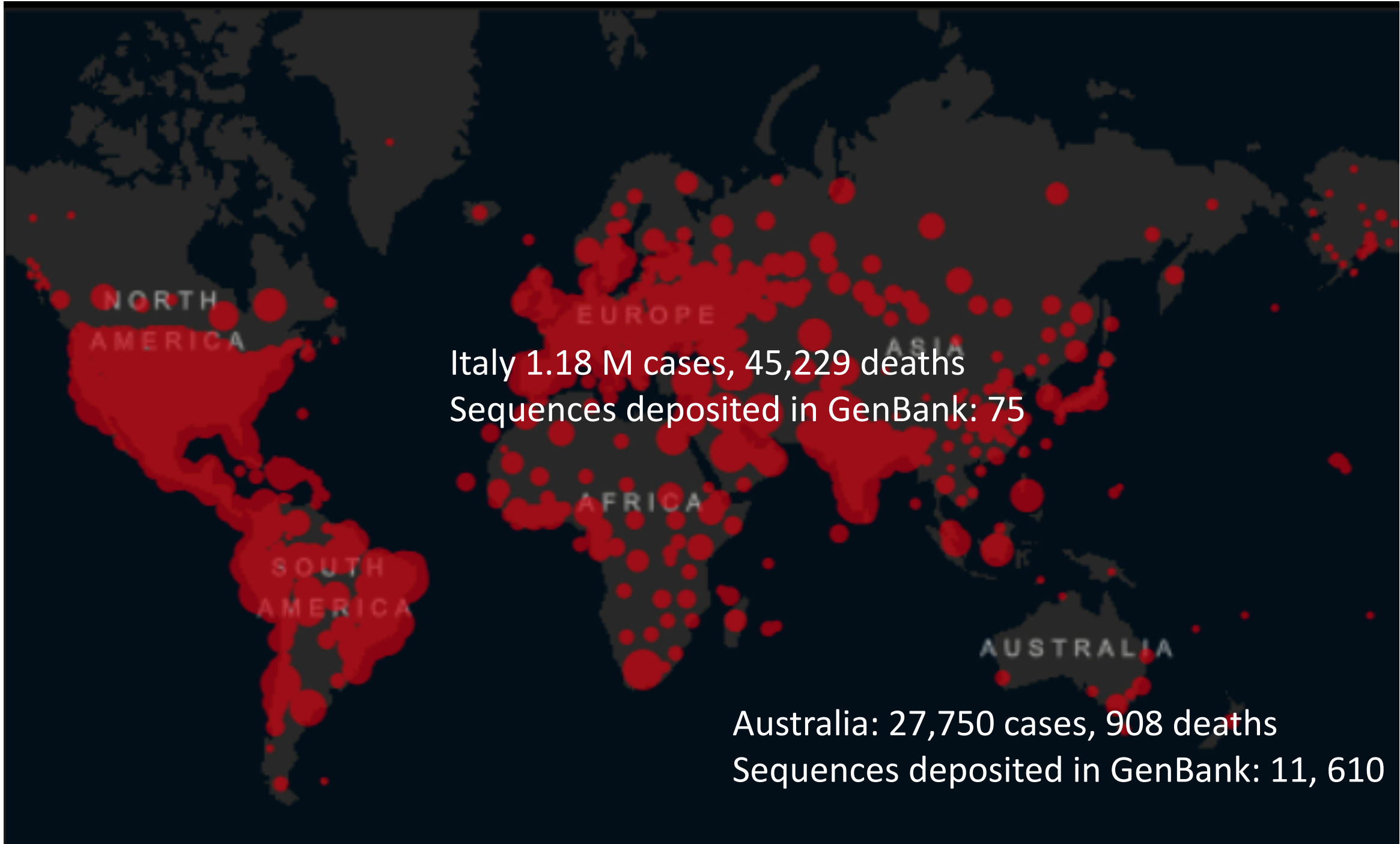
IBIOM-CNR  
ELIXIR-IT

**Loredana Le Pera**

IBIOM-CNR  
IBPM-CNR  
ELIXIR-IT

**Allegra Via**

IBPM-CNR  
ELIXIR-IT



Italy 1.18 M cases, 45,229 deaths  
Sequences deposited in GenBank: 75

Australia: 27,750 cases, 908 deaths  
Sequences deposited in GenBank: 11, 610



*I numeri sono fuori controllo, non si può agire alla cieca: con un database nazionale si portebbe fare un tracciamento più preciso dei contatti*

*Servono dati affidabili, puntuali e armonizzati a livello europeo per studiare e combattere il Covid-19. Serve un database europeo multidisciplinare*

*-- Giorgio Parisi --*

*Fisico, presidente dell'Accademia dei Lincei*

*Abbiamo avuto 250mila casi e ancora non sappiamo quale sia il rischio delle singole situazioni in cui siamo esposti al contagio. Ne sapremmo di più, se avessimo raccolto i dati in modo coordinato. Invece ancora oggi non esiste uno strumento tecnologico valido in tutto il Paese per registrare i dati dei casi e dei loro contatti*

-- Dott.ssa Stefania Salmaso --

Epidemiologa ed ex direttrice del Centro nazionale di epidemiologia e sorveglianza dell'ISS

# COVID-19: I dati su cui prende le decisioni il governo devono essere pubblici!

[Petizione Change.org](https://www.change.org/p/vochiamo-dati-aperti-sul-covid-19-ben-descritti-aggiornati-e-machine-readable)

30.315 hanno firmato



Dati pubblici, disaggregate, continuamente aggiornati, ben documentati e facilmente accessibili a ricercatori, decisori, media e cittadini

## European Commission signs letter to scholarly publishing community in the fight against coronavirus

The European Commission has added its support to a call to the scholarly publishing community urging them to make Covid-19 and coronavirus publications and the data supporting them immediately accessible via public repositories to support the ongoing public health efforts.

## Italian Computing and Data Infrastructure

### Infrastrutture italiane e COVID-19



ICDI ha offerto supporto alla raccolta di informazioni sulle risorse infrastrutturali ad accesso libero per la ricerca su SARS-CoV-2 e COVID-19 in Italia, promossa dalla delegazione italiana in ESFRI e dal rappresentante nazionale nell'EOSC Governing board. I risultati dell'indagine sono stati analizzati e riassunti in un documento trasmesso al MUR, alla Governing Board di EOSC e ad ESFRI.

COVID-19 - VERSO UNA  
PIATTAFORMA EUROPEA PER I  
METADATI

EMBL-EBI ha approntato, su mandato della Commissione europea e in collaborazione con iniziative europee esistenti, il portale della Piattaforma COVID-19.



## Open Science e Covid-19

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Le principali iniziative europee per la condivisione di dati e dei risultati della ricerca a supporto della comunità scientifica





## RDA COVID-19 Recommendations and Guidelines

Clinical



Omics



Epidemiology



Social Sciences



Community Participation for Data Sharing under COVID-19

Indigenous Data under COVID-19

Legal and Ethical Considerations under COVID-19

Research Software Sharing for Data Analysis under COVID-19

- launched as a community-driven initiative in 2013 (EU, US, Australia)
- social and technical infrastructure to enable open sharing and re-use of data
- 30 June 2020: Final version of the RDA COVID-19 Recommendations and Guidelines for Data Sharing

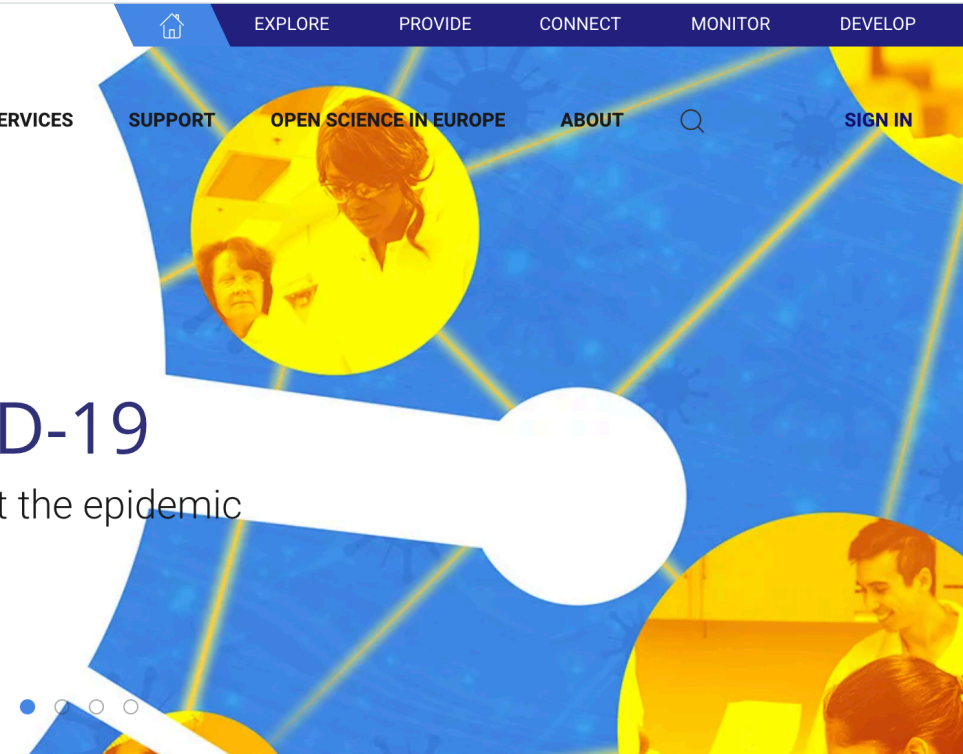
- funded since 2009 by the EC (FP7 and H2020)
- aimed to support the implementation of Open Access in Europe, and
- to provide unlimited, barrier free, open access to research outputs financed by public funding in Europe



## OpenAIRE for COVID-19

Activities to help researchers combat the epidemic and understand its aftermath.

FIND OUT MORE



<https://www.openaire.eu/>



<https://elixir-europe.org/>

- intergovernmental organisation founded in December 2013
- coordinates life science resources across Europe so that they form a single infrastructure
- databases, software tools, training materials, cloud storage and supercomputers
- 22 members (nodi ELIXIR) and one Observer
- > 220 research organisations

A screenshot of the ELIXIR website homepage. The header is dark blue with the ELIXIR logo on the left and navigation links: ABOUT US, SERVICES, HOW WE WORK, EVENTS, NEWS, INTRANET. The main content area has a light grey background. On the left, there is a text box describing ELIXIR's mission. On the right, there is a large image of a virus particle with the text "ELIXIR support for SARS-CoV-2 research". Below this, there are four service boxes: Services, Platforms, EU Projects, and Communities, each with an icon and a brief description. A "Screenshot" label is at the bottom right.

**ELIXIR** ABOUT US SERVICES HOW WE WORK EVENTS NEWS INTRANET

ELIXIR unites Europe's leading life science organisations in managing and safeguarding the increasing volume of data being generated by publicly funded research. It coordinates, integrates and sustains bioinformatics resources across its member states and enables users in academia and industry to access services that are vital for their research. See [About us](#).

**ELIXIR support for SARS-CoV-2 research**

**Services**  
ELIXIR services make it easier to discover, store, and analyse life science data.

**Platforms**  
ELIXIR's activities are divided into five areas called 'Platforms'.

**EU Projects**  
ELIXIR both collaborates in and coordinates EU projects.

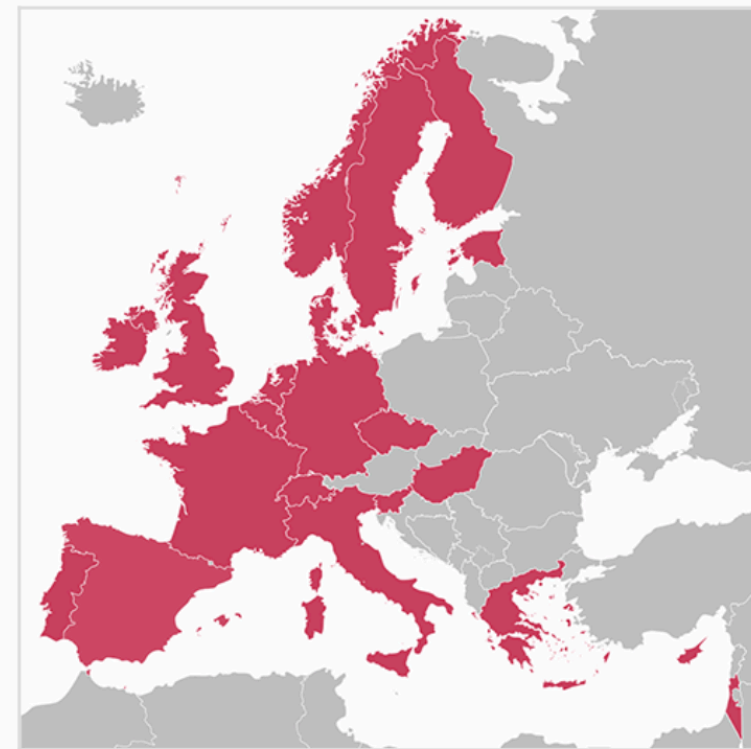
**Communities**  
Communities develop services that are specialised for particular life science domains.

Screenshot

# ELIXIR support to COVID-19 research

ELIXIR provides a range of services that you can use for studying the SARS-CoV-2 coronavirus and the COVID-19 disease. If you have questions about our COVID-19 related services, please contact Kathi at [katharina.lauer@elixir-europe.org](mailto:katharina.lauer@elixir-europe.org).

- Find a database to store your data
- Access data relevant to COVID-19
- Make your data easier to find and share
- Find software and workflows to analyse your data
- Find computing resources to help you analyse datasets
- Contribute to ELIXIR's work on COVID-19
- Find COVID-19 publications from ELIXIR
- Services offered by other European infrastructures
- Find out more



Use our [interactive map](#) to find out what each country in ELIXIR is doing in response to COVID-19.

<https://elixir-europe.org/services/covid-19>



# European COVID-19 Data Platform

<https://www.covid19dataportal.org/>



- launched in April 2020
- bring together relevant datasets for sharing and analysis in an effort to accelerate COVID-19 research
- enables researchers to upload, access and analyse COVID-19 related data



[About](#) [Data Hubs](#) [Related resources](#) [Our partners](#) [Submit data](#)

[Sequences](#) [Expression](#) [Proteins](#) [Structures](#) [Compounds](#) [Targets](#) [Literature](#)

Accelerating research through data sharing

## Sequences →

Raw and assembled sequences related to the COVID-19 outbreak, including outbreak isolates and records relating to coronavirus biology. Includes extensive sampling information.

[38,634 records >](#)

## Expression data →

Gene and protein expression data of human genes implicated in the virus infection of the host cells. Identifying cell types and genes with highest expression in SARS-CoV-2 infections.

[53 records >](#)

## About this portal

The COVID-19 Data Portal was launched in April 2020 to bring together relevant datasets for sharing and analysis in an effort to accelerate coronavirus research. It enables researchers to upload, access and analyse COVID-19 related reference data and specialist datasets as part of the wider European COVID-19 Data Platform.

SUPPORT & FEEDBACK

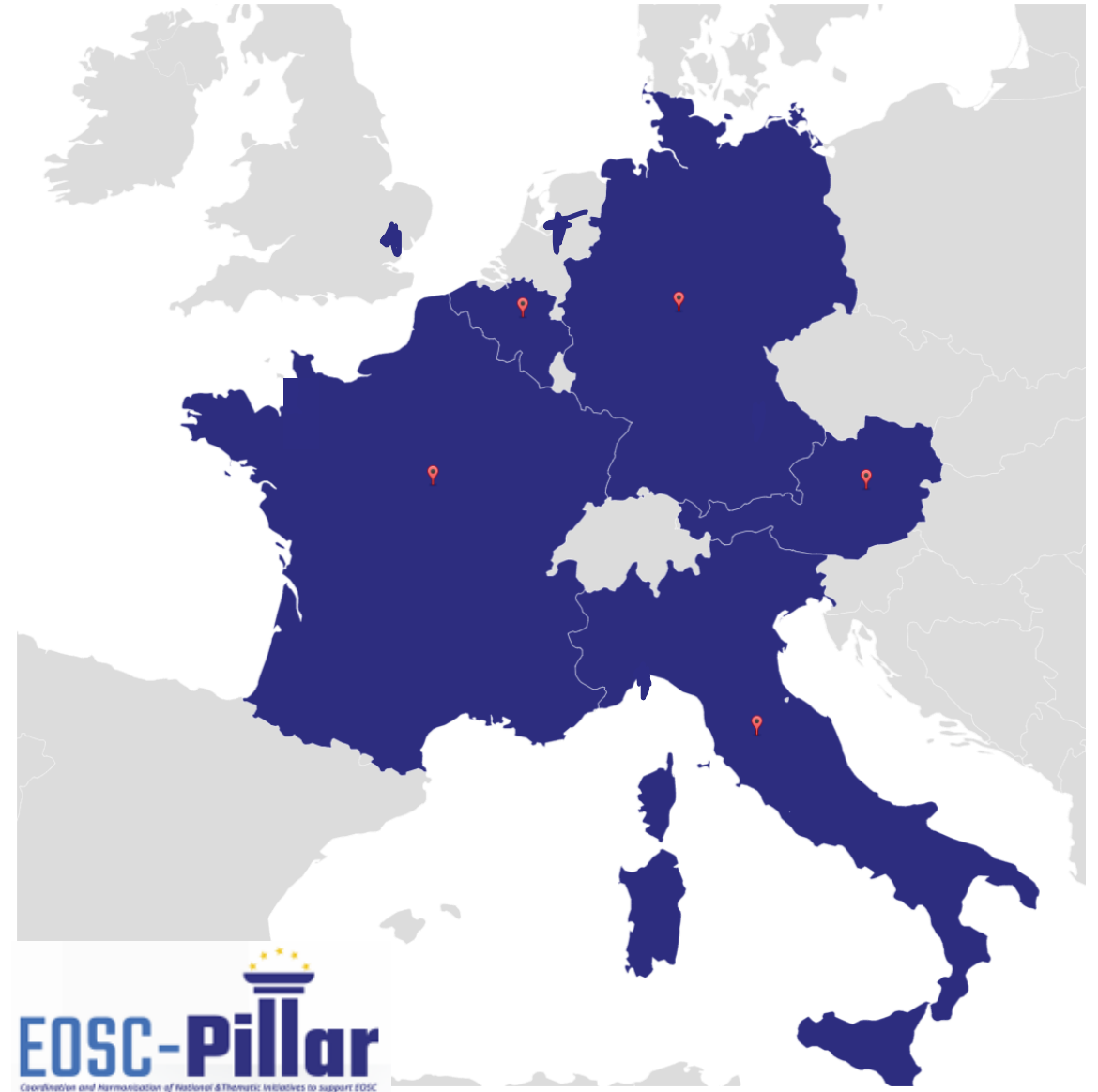
# European Open Science Cloud (EOSC)

- ★ EU initiative aiming at developing a cloud infrastructure providing its users with services promoting **open science** practices

## EOSC-Pillar

- ★ One of the regional projects funded by the European Commission to co-create the European Open Science Cloud (EOSC)
- ★ July 2019 - June 2022
- ★ Countries involved: Italy, Belgium, Austria, Germany, France

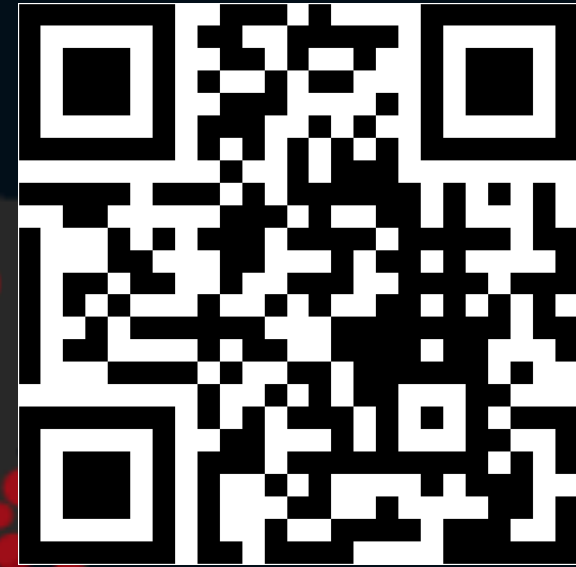
[www.eosc-pillar.eu](http://www.eosc-pillar.eu)





# Programme

- **Questionnaire:** [www.menti.com](http://www.menti.com) - Codice: 40 25 92 5
- **Emma Lazzeri**, ricercatrice CNR, Coordinatrice OpenAIRE NOAD e nodo italiano RDA: *“L'efficacia del modello Open Science e il suo metodo di cooperazione nel contesto della pandemia in corso. Ruolo e azioni di OpenAIRE e RDA”*
- **Graziano Pesole**, Coordinatore di ELIXIR-IT, Professore UNIBA, associato CNR-IBIOM: *“La condivisione dei dati al tempo del Covid-19: sfide e opportunità per l'Italia. Ruolo e azioni di ELIXIR”*.
- Q&A - Discussion
- Sara Casati, eticista nella ELSI services and Research Unit di BBMRI ERIC



Certificate of attendance: <https://bit.ly/certificate16-11-2020>