

# Introduction and Motivations: Open Science and Access to Research Data

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Consiglio Nazionale delle Ricerche

# Course outline

Nov  
24

Introduction and  
motivations:  
access to research  
data

Nov  
26

Federated  
approaches to data  
and service  
integration:  
experiences from  
EPOS research  
infrastructure

Dec  
1

Research Data  
Management:  
Open Data, FAIR  
Data and Data  
Management Plan

Dec  
3

Demo session:  
Open Science  
Tools and Services

# Practicalities

During the course, we will use different tools and services to

- Share
- Collaborate
- Interact



# Virtual Research Environment

- We set up a Virtual Research Environment (VRE) for this course. By entering the VRE you will find:
  - A dedicated forum (social networking) where you can ask questions after the lessons, discuss, share experiences. Trainers will use the forum to share important information about the course.
  - A dedicated workspace where trainers will share course material and other useful documentation
- To join the VRE, you can use your institutional, google or LinkedIn account:

<https://eosc-pillar.d4science.org/group/eosc-pillar-gateway/explore?siteId=273133421>





# Interactive Zoom buttons



Chat



Raise Hand



Q&A

## CHAT

Use the Chat for technical/ practical messages. Useful links will be shared here during the lessons

## RAISE HAND

If you wish to speak during the discussion sections, please raise your hand

## Q&A

Please use the Q&A button to pose questions anytime during the course. Questions will be answered in the discussion sessions, after the presentations.

# Mentimeter

- Mentimeter allows for a quick **interaction** with the audience.
- You will be able to **post anonymous comments**
- You will be asked to **answer questions anonymously**
- Results of the interactions will be **available live**
- You can **access** mentimeter from any device (mobile pc, tablet...)
  - Go to [www.menti.com](https://www.menti.com) and enter code: **17 62 71**
  - Click on the direct link: <https://www.menti.com/663okkc6efu>
  - Scan the QR code





Let's start!



# How I imagined my life as a researcher



**EOSC-Pillar**  
Coordination and Harmonisation of National & Thematic Initiatives to support EOSC



Pic credits: ThisIsEngineering, Tobias Bjørkli, Martin Lopez, Anna Shvets, Yuting Gao, Tom Fisk, panumas nikhomkhai, Devon Rockola, Spencer Davis on Pexels

Adapted from of Federica Tanlongo, et al. ESOF2020, <https://zenodo.org/record/4031170#.X2zCnhMzbPq>



# Reality: what do I need to do to advance my career?



I need to **publish** in high Impact Journals!

I need to **be cited**!







# Access to Scientific Literature

# Did you know?

Reading your own article outside the Institutional network is not free.

If you try to access from your home, you will hit a **paywall**

IEEE.org | IEEE Xplore Digital Library | IEEE-SA | IEEE Spectrum | More Sites

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Enter keywords or phrases (Note: Searches metadata only by default. A search for 'smart grid' = 'smart AND grid')

Advanced Search | Other Search Options

Showing 1-25 of 27 for green island

Conferences (14)

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|----------|---------|------------|
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Authors: ...

References: ...

Keywords: ...

Metrics: ...

Date of Conference: 5-7 Oct. 2016

Date Added to IEEE Xplore: 16 January 2017

INSPEC Accession Number: 16600128

Publisher: IEEE

Conference Location: London, UK

ISBN Information: ...

I. Introduction

Natural hazards produced by landslides and other ground failures are responsible for great damages, as human suffering, huge economic losses, and environmental degradation. Many strategies for reducing damages and impact from this kind of events have been proposed, for example, to develop a real-time monitoring and prediction capability in the regions most affected by landslides and applying remote sensing technologies [1]. Several different approaches for controlling and mapping the movement of ground displacements have been proposed, such as ground-based sensors, inclinometers, laser or solar radar, etc. However, all these solutions provide only a localized deformation information and are, for this reason, expensive and time consuming to be installed, as well as ineffective when monitoring broad areas, such as landslides monitoring on inaccessible areas [2]. To overcome these limitations, a remote sensing approach, based on radars, is well suited as it is able to

Sign in to Continue Reading



***Your Institutions pays***

Scientific Journals are based on  
Subscriptions: your Institution pays,  
you can access and read the  
contents

What you get is access, not  
ownership!  
Your institution owns nothing!!!

***You get access***



# Costs of scientific literature: business models

- **Traditional subscription based**

Research Institutions pay annual fees to give access to the Journal contents to their researchers (not to own the literature!)

- **Gold Open Access**

Articles published in Gold Open Access Journals are accessible to anyone starting from the very moment of the publication. Sometimes the author pays an APC (Article Processing Charge) to give access to the public to his/her publication

- **Hybrid Model**

The Journal is a traditional subscription based one, but the editor charges the authors an APC to open access their specific paper to the World.

1-3 Millions  
euros

100-6000  
euros

100-3000  
euros



Double dipping



”

*Schimmer, R., Geschuhn, K. K., & Vogler, A. (2015). Disrupting the subscription journals' business model for the necessary large-scale transformation to open access. doi:10.17617/1.3.*

Estimation: **10 Billions Dollars**  
used for journal subscriptions

That is the money Institutions pay to  
re-buy the article their own  
researchers write!

# What is the problem?

- Big deals with editors are **not transparent**
- Research can be **accessed by few** with long **delays**
- Authors are giving away their **copyrights** thinking they have no choice
- **Subscription** costs are **rising** every year (by 1-2%)
- **APC** costs are **not tracked**
- **Authors, reviewers and editors are not paid** but are giving for free the raw material to scientific publishers who make great profit out of it:

the recording and the film industries in size, but it is far more profitable. In 2010, Elsevier's scientific publishing arm reported profits of £724m on just over £2bn in revenue. It was a 36% margin - higher than Apple, Google, or Amazon posted that year.

Why do we spend **public  
money** to close the  
research results behind  
limited access  
**subscriptions scientific  
journals?**



# Research Evaluation

Based on bibliometric  
indexes or, for non-  
bibliometric sectors, on  
selected «fascia A» list of  
journals

## *H-index*

For a **researcher**: the maximum value of  $h$  such that the given author has published  $h$  papers that have each been cited at least  $h$  times

For a given year  $y$ , the specific **journal** Impact Factor is:

$$IF_y = \frac{\text{Citations}_{y-1} + \text{Citations}_{y-2}}{\text{Publications}_{y-1} + \text{Publications}_{y-2}}$$

## *Impact Factor*



# Citation based indexes criticism

- Early career researchers are penalised
- The citation context is not considered (eg. Negative citation)
- They are influenced by the limitation of the citational databases (which are all owned by big scientific publishers)
- It can be manipulated by both authors and reviewers (self and cross citations)
- It does not take into account the number of authors in a paper and their contribution given
- It does not take into account research multidisciplinary
- It does not facilitate science freedom.

DORA, 2013, <https://sfdora.org/read/>

McKiernan, et al, 2019. <https://elifesciences.org/articles/47338>

Niles, et al, 2019. <https://www.biorxiv.org/content/10.1101/706622v1>

Alder, et al, 2008. <https://www.mathunion.org/fileadmin/IMU/Report/CitationStatistics.pdf>

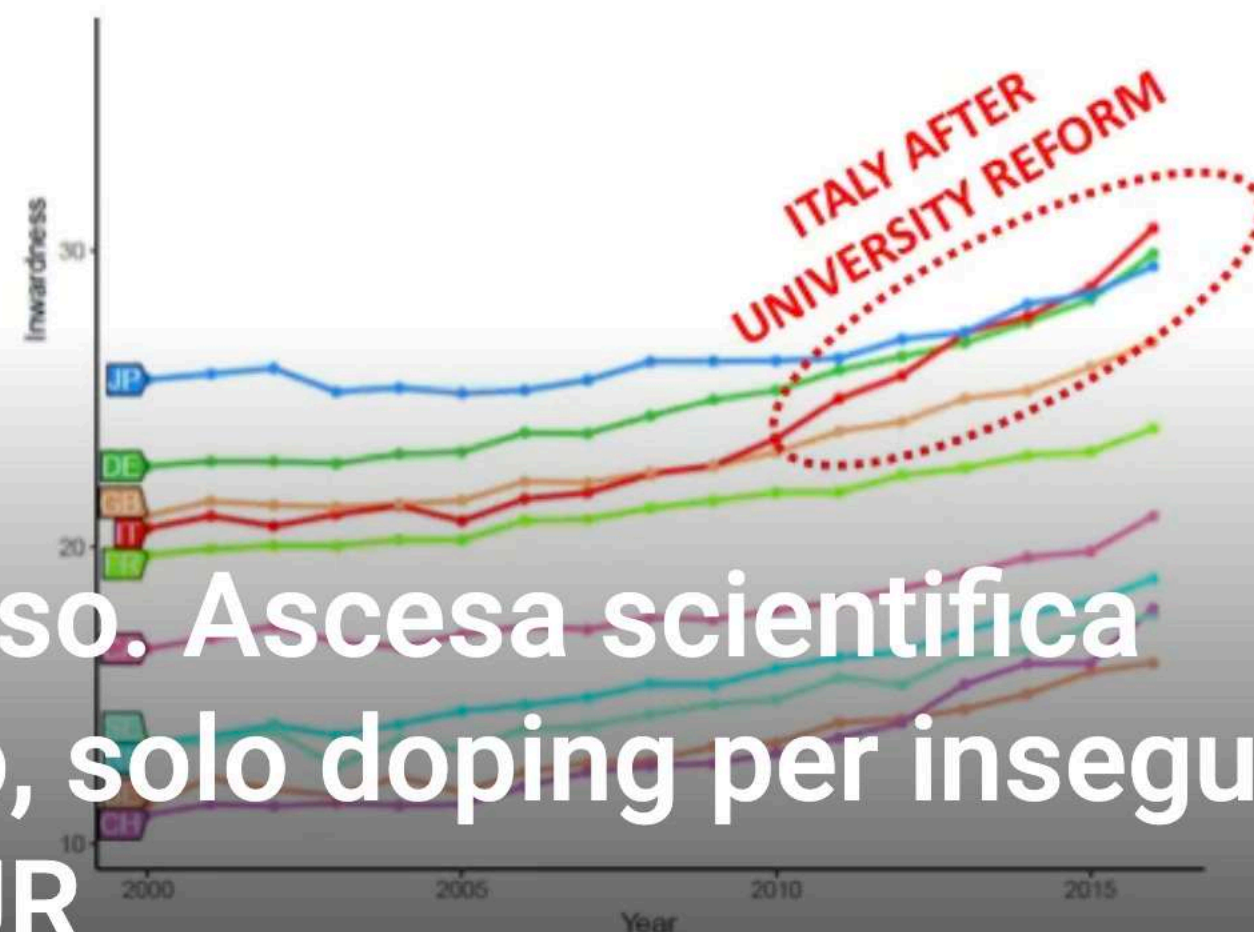


”

**What are we  
evaluating?**

Anvur Bibliometria

# Citarsi addosso. Ascesa scientifica dell'Italia? No, solo doping per inseguire i criteri ANVUR



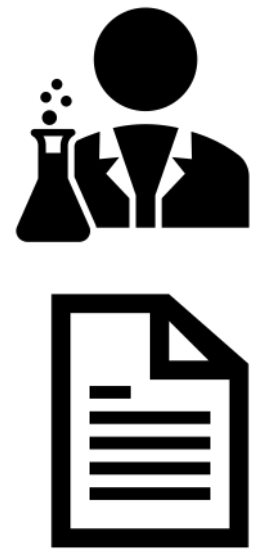
Di A.Baccini G.DeNicolao E.Petrovich - 11 Settembre 2019 117





Scientific Journals

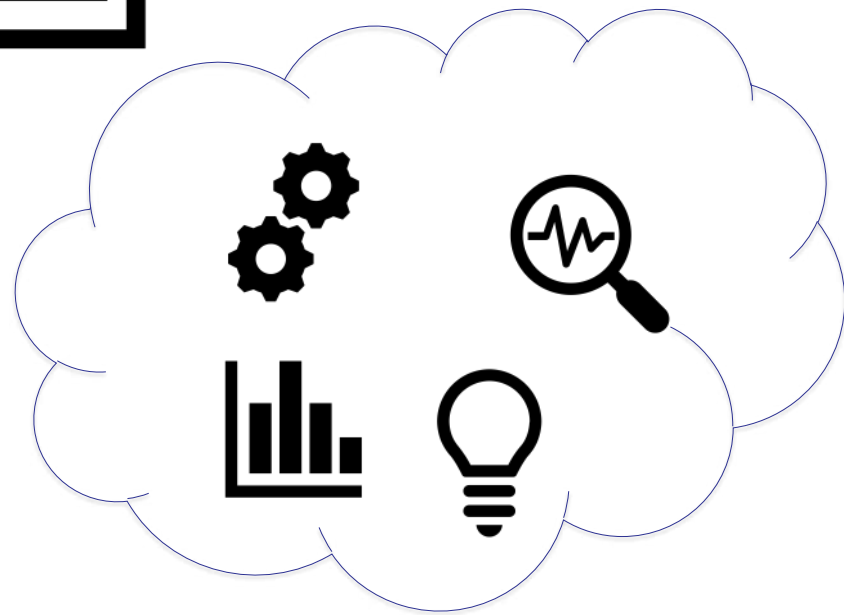
Journal Editor



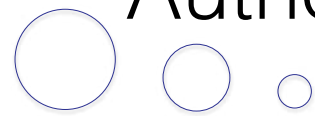
Reviewers



Journal Editor



Author



Pre-print



Post-print

Editorial Version

Scientific Community





**Claire Lehmann** ✓  
@clairlemon

Academic journals:

- don't fund research
- don't pay authors
- don't pay peer reviewers
- charge libraries & the public for access to research that is publicly funded
- issue copyright violations to researchers

Why do we put up with this?

3:03 PM · 2019-10-27 · [Twitter for iPhone](#)



# Alternatives to APC-based Open Access Publishing

- **Community driven effort**
  - High energy physics: [SCOAP3 initiative](#)
- **Institutional publishing**
  - Università di Milano: [riviste.unimi.it](#)
- **Funder sponsored**
  - Wellcome Trust: [Wellcome Open Research](#)
  - Bill and Melinda Gates Foundation: [Gates Open Research](#)
  - European Commission: [Open Research Europe](#) (*we'll see this in details in a moment!*)

# How about the rest?

Science is more than publishing papers in commercial platforms!



# What are we missing in research evaluation?

Negative results

Data

Algorithms

Processes

Software

Methodologies

Educational Resources

Peer-review

Grey Literature

Project proposals

Leadership skills

Product  
development

...



”

Publishing research without  
data is simply advertising, not  
science

*Graham Steel*



Why do we need to  
share Data?

”

**An experiment is  
reproducible until another  
laboratory tries to repeat it**

Alexander Kohn





# Reproducibility

Is (**still**) a principle of the Scientific Method!

Data is the proof of your papers: how can others trust your research without accessing the data?



NATIONAL

# Most Scientific Research Data From the 1990s Is Lost Forever

A new study has found that as much as 80 percent of the raw scientific data collected by researchers in the early 1990s is gone forever, mostly because no one knows where to find it.

DANIELLE WIENER-BRONNER DEC 23, 2013

## Highlights

- We examined the availability of data from 516 studies between 2 and 22 years old
- The odds of a data set being reported as extant fell by 17% per year
- Broken e-mails and obsolete storage devices were the main obstacles to data sharing
- Policies mandating data archiving at publication are clearly needed

## Current Biology

REPORT | VOLUME 24, ISSUE 1, P94-97, JANUARY 06, 2014

# The Availability of Research Data Declines Rapidly with Article Age

[Timothy H. Vines](#)   • [Arianne Y.K. Albert](#) • [Rose L. Andrew](#) • ... [Jean-Sébastien Moore](#) •

[Sébastien Renaut](#) • [Diana J. Rennison](#) • [Show all authors](#)

[Open Archive](#) • Published: December 19, 2013 • DOI: <https://doi.org/10.1016/j.cub.2013.11.014> •



# Austerity theory

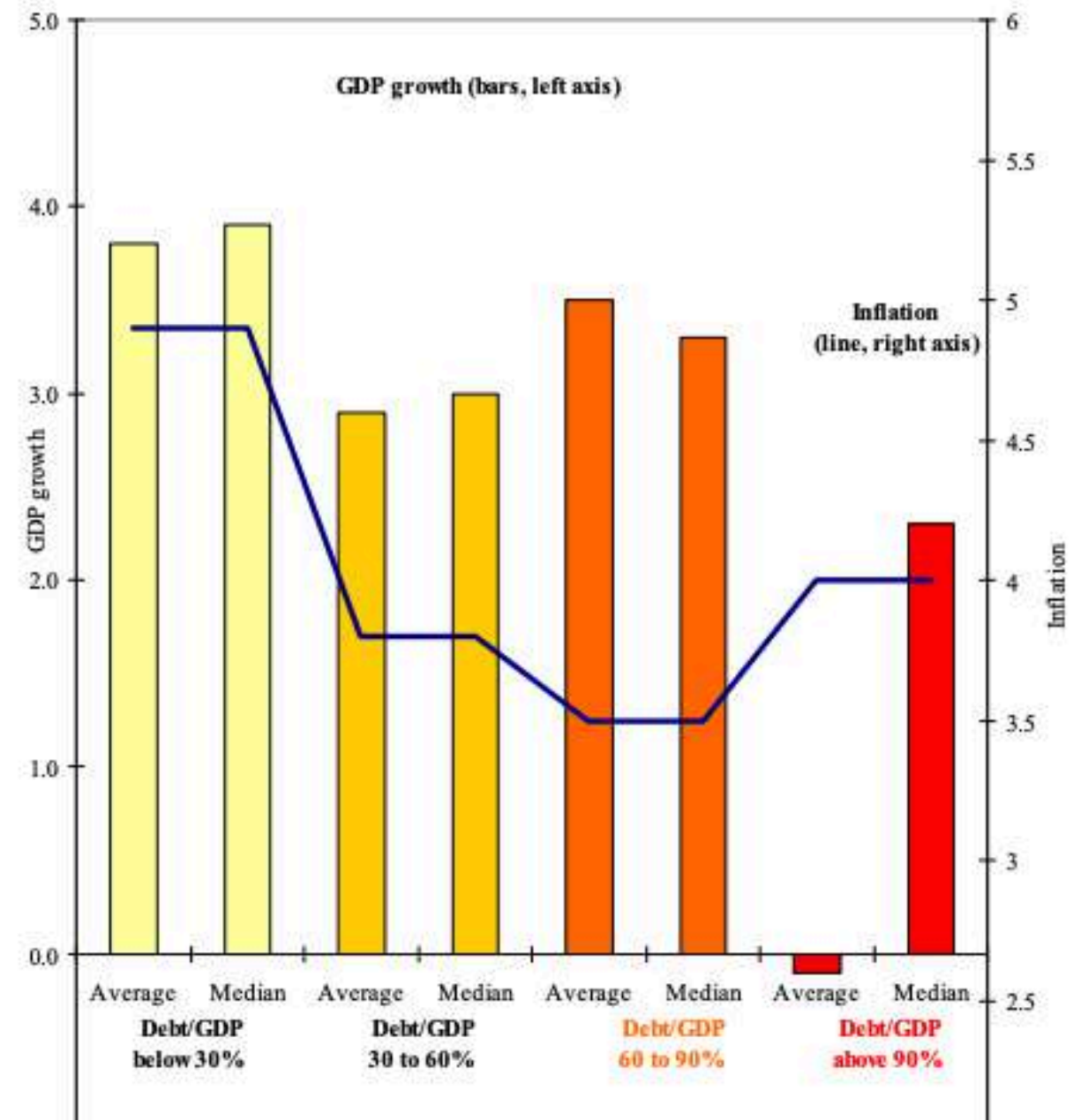
Thesis presented: A Country economic growth is strongly affected (and decreased) whenever the amount of debt exceeds 90% of the Gross Domestic Product.

The results shown in the paper have been used to support public austerity policies during the recent economic crisis.

But some considerations were **based on incorrect calculations.**

A PhD student who fails to replicate the results finds out when asking the authors for the original dataset.

Figure 2. Government Debt, Growth, and Inflation: Selected Advanced Economies, 1946-2009



La figura 2, tratta dal paper "Growth in a time of debt", di Carmen Reinhart e Kenneth Rogoff, era basata su calcoli errati. Il paper: [https://www.nber.org/papers/w15639.pdf?new\\_window=1](https://www.nber.org/papers/w15639.pdf?new_window=1). Una ricostruzione della vicenda: <https://www.bbc.com/news/magazine-22223190>



## Il debito pubblico deprime la crescita? Il clamoroso errore di Carmen Reinhart e Kenneth Rogoff [2013](#)

Publicato da keynesblog il 18 aprile 2013 in consigliati, Economia, it4, Teoria economica



Carmen Reinhart e Kenneth Rogoff

Siti e blog di economia non parlano d'altro. Un famoso paper di Carmen Reinhart e Kenneth Rogoff, tra i più citati negli ultimi anni, nel quale si evidenziava l'esistenza di una correlazione tra un alto rapporto debito/PIL (maggiore del 90%) e la bassa crescita, è inficiato da gravi problemi metodologici e addirittura da un banale errore

## Does High Public Debt Consistently Stifle Economic Growth? A Critique of Reinhart and Rogoff

Thomas Herndon\*

Michael Ash

Robert Pollin

April 15, 2013

[Herndon, 2013](#)

JEL CODES: E60, E62, E65

### Abstract

We replicate Reinhart and Rogoff (2010a and 2010b) and find that coding errors, selective exclusion of available data, and unconventional weighting of summary statistics lead to serious errors that inaccurately represent the relationship between public debt and GDP growth among 20 advanced economies in the post-war period. Our finding is that when properly calculated, the average real GDP growth rate for countries carrying a public-debt-to-GDP ratio of over 90 percent is actually 2.2 percent, not -0.1 percent as published in Reinhart and Rogoff. That is, contrary to RR, average GDP growth at public debt/GDP ratios over 90 percent is not dramatically different than when debt/GDP ratios are lower.

We also show how the relationship between public debt and GDP growth varies significantly by time period and country. Overall, the evidence we review contradicts Reinhart and Rogoff's claim to have identified an important stylized fact, that public debt loads greater than 90 percent of GDP consistently reduce GDP growth.

# Covid-19 and preprint and article retraction

Preprints allow for a wider and open discussion in science

Discussion does not end with the review process!

Retraction is actually good for science it means that the community checks results even outside of the official review process

WITHDRAWN

Comments (6)

## Hydroxychloroquine plus azithromycin: a potential interest in reducing in-hospital morbidity due to COVID-19 pneumonia (HI-ZY-COVID)?

Benjamin Davido, Thibaud Lansaman, Christine Lawrence, Jean-Claude Alvarez, Frederique Bouchand, Pierre Moine, Veronique Perronne, Aurelie Le Gal, Djillali Annane, Christian Perronne, Pierre De Truchis, COVID-19 RPC Team

doi: <https://doi.org/10.1101/2020.05.05.20088757>

**This article is a preprint and has not been peer-reviewed [what does this mean?]. It reports new medical research that has yet to be evaluated and so should not be used to guide clinical practice.**

Abstract

Info/History

Metrics

*The authors have withdrawn this manuscript and do not wish it to be cited. Because of controversy about hydroxychloroquine and the retrospective nature of their study, they intend to revise the manuscript after peer review.*

## THE LANCET

ARTICLES | ONLINE FIRST

### RETRACTED: Hydroxychloroquine or chloroquine with or without a macrolide for treatment of COVID-19: a multinational registry analysis

Prof Mandeep R Mehra, MD · Sapan S Desai, MD · Prof Frank Ruschitzka, MD · Amit N Patel, MD

Published: May 22, 2020 · DOI: [https://doi.org/10.1016/S0140-6736\(20\)31180-6](https://doi.org/10.1016/S0140-6736(20)31180-6) · Check for updates

Summary

Introduction

Methods

Results

Discussion

Supplementary

Material

References

Article Info

Figures

## Summary

### Background

Hydroxychloroquine or chloroquine, often in combination with a second-generation macrolide, are being widely used for treatment of COVID-19, despite no conclusive evidence of their benefit. Although generally safe when used for approved indications such as autoimmune disease or malaria, the safety and benefit of these treatment regimens are poorly evaluated in COVID-19.

### Methods

We did a multinational registry analysis of the use of hydroxychloroquine or chloroquine with or without a macrolide for treatment of COVID-19. The registry comprised data from 671 hospitals in six continents. We included patients hospitalised between Dec 20, 2019, and April 14, 2020, with a positive laboratory finding for SARS-CoV-2. Patients who received one of the treatments of interest within 48 h of diagnosis were included in one of four treatment groups (chloroquine alone, chloroquine with a macrolide, hydroxychloroquine alone, or hydroxychloroquine with a macrolide), and patients who received none of these treatments formed the control group. Patients for whom one of the treatments of interest was initiated more than 48 h after diagnosis or while they



## Top 10 most highly cited retracted papers

| Article                                                                                                                                                                                                                                                                                                                                                                                          | Year of retraction   | Citing Articles before retraction | Citing Articles after retraction | Total cites (journals indexed by Web of Science) |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-----------------------------------|----------------------------------|--------------------------------------------------|
| 1. <b>Primary Prevention of Cardiovascular Disease with a Mediterranean Diet.</b> N Engl J Med April 4, 2013<br>Estruch R, Ros E, Salas-Salvado J, Covas MI, Corella, D, Aros F, Gomez-Gracia E, Ruiz-Gutiérrez V, Fiol M, Lapetra J, Lamuela-Raventos RM, Serra-Majem L, Pinto X, Basora J, Munoz MA, Sorli JV, Martinez JA, Martinez-Gonzalez MA, et al., for the PREDIMED Study Investigators | <a href="#">2018</a> | 1895                              | 371                              | 2266                                             |
| 2. <b>Visfatin: A protein secreted by visceral fat that mimics the effects of insulin.</b> SCIENCE, JAN 21 2005<br>Fukuhara A, Matsuda M, Nishizawa M, Segawa K, Tanaka M, Kishimoto K, Matsuki Y, Murakami M, Ichisaka T, Murakami H, Watanabe E, Takagi T, Akiyoshi M, Ohtsubo T, Kihara S, Yamashita S, Makishima M, Funahashi T, Yamanaka S, Hiramatsu R, Matsuzawa Y, Shimomura I.          | <a href="#">2007</a> | 228                               | 1096                             | 1324                                             |
| 3. <b>Ileal-lymphoid-nodular hyperplasia, non-specific colitis, and pervasive developmental disorder in children.</b> LANCET, FEB 28 1998<br>Wakefield AJ, Murch SH, Anthony A, Linnell J, Casson DM, Malik M, Berelowitz M, Dhillon AP, Thomson MA, Harvey P, Valentine A, Davies SE, Walker-Smith JA                                                                                           | <a href="#">2010</a> | 633                               | 669                              | 1302                                             |
| 4. <b>An enhanced transient expression system in plants based on suppression of gene silencing by the p19 protein of tomato bushy stunt virus.</b> PLANT JOURNAL, MAR 2003<br>Voinnet O, Rivas S, Mestre P, Baulcombe D.                                                                                                                                                                         | <a href="#">2015</a> | 895                               | 271                              | 1166                                             |
| 5. <b>Cardiac stem cells in patients with ischaemic cardiomyopathy (SCIPIO): initial results of a randomised phase 1 trial.</b> LANCET, NOV 2011<br>Bolti, Roberto; Chugh, Atul R.; D'Amaro, Domenico; et al.                                                                                                                                                                                    | <a href="#">2019</a> | 904                               | 22                               | 926                                              |
| 7. <b>TREEFINDER: a powerful graphical analysis environment for molecular phylogenetics.</b> BMC EVOLUTIONARY BIOLOGY, JUN 28 2004<br>Jobb G, von Haeseler A, Strimmer K.                                                                                                                                                                                                                        | <a href="#">2015</a> | 772                               | 132                              | 904                                              |
| 6. <b>Purification and ex vivo expansion of postnatal human marrow mesodermal progenitor cells.</b> BLOOD, NOV 1 2001<br>Reyes M, Lund T, Lenvik T, Aguiar D, Koodie L, Verfaillie CM.                                                                                                                                                                                                           | <a href="#">2009</a> | 600                               | 292                              | 892                                              |
| 8. <b>Viral pathogenicity determinants are suppressors of transgene silencing in Nicotiana benthamiana.</b> EMBO JOURNAL, NOV 16 1998<br>Brigneti G, Voinnet O, Li WX, Ji LH, Ding SW, Baulcombe DC                                                                                                                                                                                              | <a href="#">2015</a> | 773                               | 54                               | 827                                              |
| 9. <b>Spontaneous human adult stem cell transformation.</b> CANCER RESEARCH, APR 15 2005<br>Rubio D, Garcia-Castro J, Martín MC, de la Fuente R, Cigudosa JC, Lloyd AC, Bernad A.                                                                                                                                                                                                                | <a href="#">2010</a> | 326                               | 429                              | 755                                              |
| 10. <b>Combination treatment of angiotensin-II receptor blocker and angiotensin-converting-enzyme inhibitor in non-diabetic renal disease (COOPERATE): a randomised controlled trial.</b> LANCET, JAN 11 2003<br>Nakao N, Yoshimura A, Morita H, Takada M, Kayano T, Ideura T.                                                                                                                   | <a href="#">2009</a> | 583                               | 148                              | 731                                              |

parency Index

The Retraction Watch  
LeaderboardTop 10 most highly cited re-  
tracted papers28. Thomas M Rosica (23) See also: [our coverage](#)29. Alfredo Fusco (22) See also: [our coverage](#)30. M Ghoranneviss (22) See also: [our coverage](#)31. Anil K Jaiswal (22) See also: [our coverage](#)32. Gilson Khang (22) See also: [our coverage](#)





BUT!  
This is all about to  
change...

# Worldwide ...

## Position Statement and Recommendations on Research Assessment Processes



RETHINKING RESEARCH ASSESSMENT

IDEAS FOR ACTION

5 COMMON MYTHS ABOUT EVALUATION

Hiring, promotion, and tenure decisions are largely made on "merit."

Quality research is easy to recognize and rises to the top

JIF and other similar journal-based indicators measure research quality

Researchers mostly care about journal reputation

Assessment practices will naturally improve over time

5 DESIGN PRINCIPLES

to help institutions experiment with and develop better research assessment practices

References

1. <https://www.aphis.gov/press-releases/2019/05/2019-05-20-aphis-press-release-2019-05-20>

2. <https://www.aphis.gov/press-releases/2019/05/2019-05-20-aphis-press-release-2019-05-20>

3. <https://www.aphis.gov/press-releases/2019/05/2019-05-20-aphis-press-release-2019-05-20>

4. <https://www.aphis.gov/press-releases/2019/05/2019-05-20-aphis-press-release-2019-05-20>

5. <https://www.aphis.gov/press-releases/2019/05/2019-05-20-aphis-press-release-2019-05-20>

6. <https://www.aphis.gov/press-releases/2019/05/2019-05-20-aphis-press-release-2019-05-20>

7. <https://www.aphis.gov/press-releases/2019/05/2019-05-20-aphis-press-release-2019-05-20>

8. <https://www.aphis.gov/press-releases/2019/05/2019-05-20-aphis-press-release-2019-05-20>

9. <https://www.aphis.gov/press-releases/2019/05/2019-05-20-aphis-press-release-2019-05-20>

10. <https://www.aphis.gov/press-releases/2019/05/2019-05-20-aphis-press-release-2019-05-20>

11. <https://www.aphis.gov/press-releases/2019/05/2019-05-20-aphis-press-release-2019-05-20>

12. <https://www.aphis.gov/press-releases/2019/05/2019-05-20-aphis-press-release-2019-05-20>

13. <https://www.aphis.gov/press-releases/2019/05/2019-05-20-aphis-press-release-2019-05-20>

14. <https://www.aphis.gov/press-releases/2019/05/2019-05-20-aphis-press-release-2019-05-20>

15. <https://www.aphis.gov/press-releases/2019/05/2019-05-20-aphis-press-release-2019-05-20>

16. <https://www.aphis.gov/press-releases/2019/05/2019-05-20-aphis-press-release-2019-05-20>

17. <https://www.aphis.gov/press-releases/2019/05/2019-05-20-aphis-press-release-2019-05-20>

18. <https://www.aphis.gov/press-releases/2019/05/2019-05-20-aphis-press-release-2019-05-20>

eua

EUROPEAN UNIVERSITY ASSOCIATION

SCIENCE EUROPE

Shaping the future of research

The European University Association and Science Europe Join Efforts to Improve Scholarly Research Assessment Methodologies

14 May 2019

Evaluating research and assessing researchers is fundamental to the research enterprise and core to the activities of research funders and research performing organisations, as well as universities. The European University Association (EUA) and Science Europe are committed to building a strong dialogue between their members, who share the responsibility of developing and implementing more accurate, open, transparent and responsible approaches, that better reflect the evolution of research activity in the digital era.

Today, the outcomes of scholarly research are often measured through methods based on quantitative, albeit approximate, indicators such as the journal impact factor. There is a need to move away from reductionist ways of assessing research, as well as to establish systems that better assess research potential. Universities, research funders and research performing organisations are well-placed to explore turning these innovations into systemic change.

EUA and Science Europe are committed to:

• support necessary changes for a better aim at evaluating the merits of research, a fairer and more transparent assessment of proposals and researchers.

• recognise the diversity of research and appropriate to each research field and its assessment processes

• consider a broad range of criteria to re-evaluate and ascertain assessment processes and all scientific contributions appropriate to each research field and its assessment processes

EUA and Science Europe will launch a new research assessment process, building on the opportunities for joint actions, with a view to research funders and research performing organisations.

SCIENCE EUROPE

Shaping the future of research

RECOMMENDATIONS ON RESEARCH ASSESSMENT PROCESSES

POSITION STATEMENT

July 2020

EUA BRIEFING

Reflections on University Research Assessment

Key concepts, issues and actors

Dr Brecht Saenen

Dr Lidia Bonelli-Damian

April 2019

Research Assessment in the Transition to Open Science

2019 EUA Open Science and Access Survey Results

Brecht Saenen, Rita Morais, Vinciane Giffard and Lidia Bonelli-Damian

October 2019

This is Open Access content distributed in accordance with the Creative Commons Attribution 4.0 International License Hatch, A and R. Schmidt. (2020) Rethinking Research Assessment: Ideas for Action. DORA.



# ... in Italy

## ELEMENTI PRELIMINARI DEL PROGRAMMA NAZIONALE PER LA RICERCA 2021-2027

CONSU

Agosto 2



Sostenere:

- Produzione di dati FAIR della ricerca scientifica come pratica standard (dati FAIR-by-design) per popolare tempestivamente EOSC con dati di alta qualità e riproducibilità, senza rallentare il lavoro dei ricercatori
- Libero accesso alle pubblicazioni scientifiche
- Attualizzazione della valutazione della ricerca superando i criteri bibliometrici di origine commerciale e valorizzando i contributi efficaci alla Scienza Aperta
- Coinvolgimento di ricercatori, EPR, infrastrutture di ricerca nell'adozione delle pratiche di Scienza Aperta
- Formazione dei ricercatori e di nuove figure tecniche di supporto alla gestione dei dati della ricerca (data scientist, data steward)

- Piano Nazionale Scienza Aperta e EOSC: ANALISI
- Piano Nazionale Scienza Aperta e EOSC: PROPOSTE
- Piano Nazionale Scienza Aperta e EOSC: PRIORITÀ



Contenuti di riferimento per la  
domanda n. 10 del questionario online

### Piano Nazionale Scienza Aperta e EOSC: ANALISI



#### PUNTI DI FORZA

- Ruolo dell'Italia fra i fondatori di EOSC tramite ICDI—Italian Computing and Data Infrastructure
- Rete delle Infrastrutture di Ricerca operanti in Italia, degli EPR, dei Consorzi e delle Università e loro patrimonio di dati
- Partecipazione di molti ricercatori italiani a Infrastrutture di Ricerca e Digitali europee

#### AZIONI

- Organizzazione della ricerca diffusa per la produzione di dati FAIR e l'accesso agli archivi FAIR,



- Attualizzazione della valutazione della ricerca superando i criteri bibliometrici di origine commerciale e valorizzando i contributi efficaci alla Scienza Aperta
- Coinvolgimento di ricercatori, EPR, infrastrutture di ricerca nell'adozione delle pratiche di Scienza Aperta
- Formazione dei ricercatori e di nuove figure tecniche di supporto alla gestione dei dati della ricerca (data scientist, data steward)



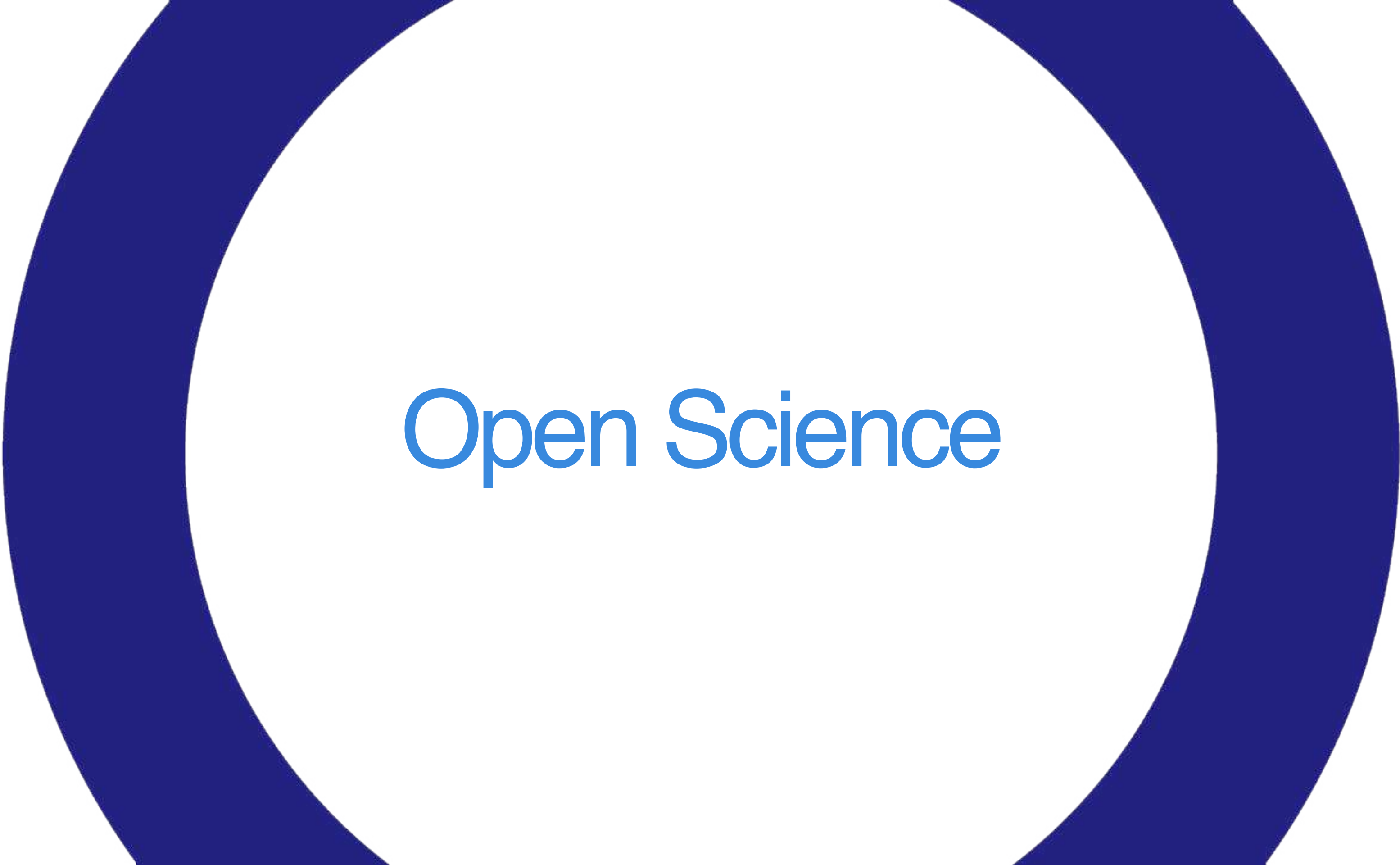
Ministero dell'Università e della Ricerca

ELEMENTI PRELIMINARI DEL PNR 2021-2027

Agosto 2020

41





Open Science

# *The opposite of Open Science is not Closed Science. It is Bad Science*

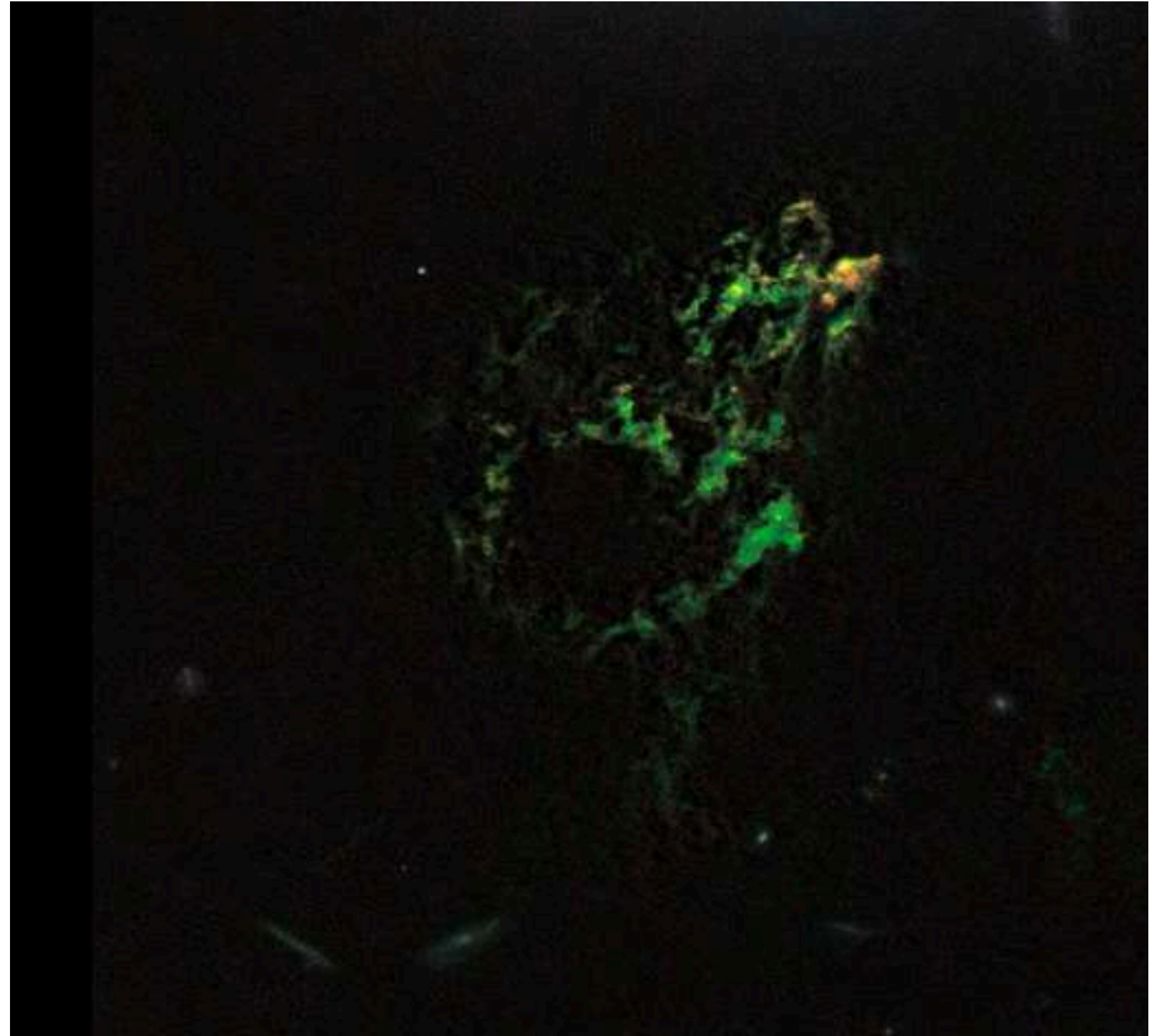
Jon Tennants





# Hanny's Voorwerp

It is a new galaxy that was detected thanks to the collaborative project Galaxy Zoo, that open the universe observation data to the citizens. The name derives from the Dutch teacher who first discovered it.





# Open Zika

Open Science based collaborative project on Zika virus:

<http://openzika.ufg.br/>



The World Health Organization has declared the Zika virus to be a global public health emergency. This was due to the rapid spread of the virus in the Americas, and concerns about its link to a rise in severe neurological diseases. Most notably, some pregnant women who have contracted the Zika virus have given birth to infants with brain development issues caused by a condition called microcephaly. In April 2016, the Centers for Disease Control confirmed the link between the Zika virus in pregnant women and cases of microcephaly in some fetuses and newborns.

Until recently, there has been relatively little research about the Zika virus – in fact, there is no known effective treatment, cure or vaccine.

The OpenZika project on IBM's World Community Grid is a global research collaboration, led by Dr. Carolina Horta at the Universidade Federal de Goiás, Brazil. The main



# Collaboration

«It is imperative to leverage scientific innovations and support principles of openness and inclusiveness in processes that generate solutions to the severe health menace that is likely to bring significant hardships to humanity.»

*UNESCO - Open access to facilitate research and information on COVID-19*



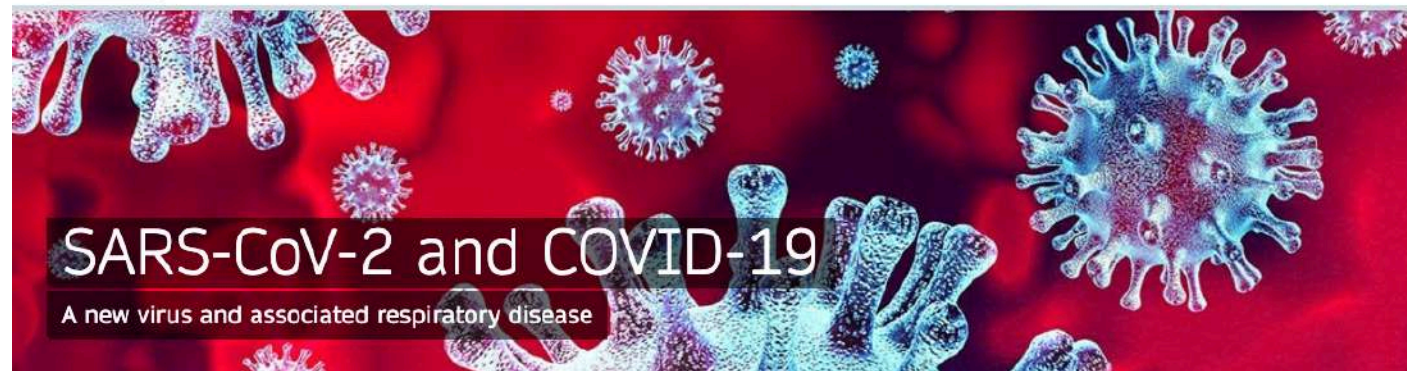
CBC.CA

**'We're opening everything': Scientists share coronavirus data in unprecedented way to contain, treat disease | CBC News**

SPRINGER NATURE

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Home



Springer Nature is committed to supporting the global response to COVID-19 enabling fast and direct access to the latest available research, evidence, and data.



About Elsevier Products & Solutions Service

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Elsevier coronavirus and Covid-19 related full text articles and chapters will be provided for as long as needed while the public health emergency is ongoing. Research tools and selected Virology and Infectious Disease Journals are open to coronavirus researchers through January 31, 2021.

Share this:        

New York, March 13, 2020



# Why Open Science?

- Currently, the scientific communication system is regulated by market interests of big commercial publishers and outdated research assessment criteria. Studies and publications are not accessible because enclosed behind expensive paywalls (usually thousands of dollars) that nobody can afford (doctors, professionals, SMEs...)
- Every institution pays **four times** for research: salaries, research funds, subscriptions to “buyback” the researches, rights to reuse
- All this with public funds; every year single institutions spend millions of euros for subscriptions to journals (instead of on research)
- Without forgetting that **neither authors nor reviewers are paid!**



”

*Schimmer, R., Geschuhn, K. K., & Vogler, A. (2015). Disrupting the subscription journals' business model for the necessary large-scale transformation to open access. doi:10.17617/1.3.*

Estimation: **10 Billions Dollars**  
used for journal subscriptions

That is the money Institutions pay to  
re-buy the article their own  
researchers write!

”

This is not about saving  
money, it is about spending  
**public money in a better  
way!**

# Open Science: Science the correct way!

**Open Science means: open each step of the research cycle.**

- Open Science principles are: **transparency, reproducibility, collaboration, inclusiveness, accessibility, accuracy, re-use**
- Open Science steps from the concept that the research that is funded with **public money** has to be made **immediately available** to the community: «*every EU citizen has the right to access and benefit from knowledge produced using public funds*» [Neelie Kroes, European Commission]
- The **European Commission** and a long list of **International Funders** made a clear choice towards Open Science





# Open Science

Open Science means a **broader access** to **publicly funded research results** and therefore helps to:

- build on previous research results (improved quality of results)
- encourage **collaboration** and avoid duplication of effort (**greater efficiency**)
- speed up **innovation** (faster progress to market means faster growth)
- **involve citizens** and society (improved transparency of the scientific process).



Research  
Infrastructures

# Open Science

Research  
Integrity

Open Access  
Publications

Open  
Software

Open Access  
Data

Open  
Metodologies

Evaluation:  
Altmetrics

Open Education

Open  
Workflows/Protocols

Citizen  
Science

Open Peer-Review

The main pillar of  
Open Science is

**OPEN ACCESS**

to publications  
and research data



# Open Access



Open Access is «free and  
unrestricted online access to  
research outputs (texts and data)»



# Beware!

Open Access  
**doesn't** mean  
paying for  
publishing!



How do you give  
access to your  
production?  
Through a  
**Repository**



# Open Access Repository

A repository stores Open Access digital objects and makes them available and downloadable. It's accessible and interoperable through a OAI-PMH protocol and it deploys a **long-term archiving policy**

Institutional

Thematic/Disciplinary

Literature

Data

Catch All

## How to chose your repository

**Literature** repository: Open Access Repository Directory

[www.opendoar.org](http://www.opendoar.org)

**Data** repository: Registry of Research Data Repository

<https://www.re3data.org/>



# Why do you need to deposit in a Repository?

## *Preserve*

Repositories are managed by institutions, countries, transnational infrastructures or solid scientific communities that implement long-term curation and preservation of content

A repository provides a public interface that allows anyone to access the metadata of digital objects. The author can assign different access rights for attachments (open, restricted, closed, embargoed, ...)

## *Share*

# Open Access to Scientific Literature

- There are two ways to implement Open Access to **scientific literature** :
  - **Green Open Access**: when the Open Access version of papers, wherever they have been published, is deposited in open archives (**repositories**), in compliance with copyright regulations; editors that may retain the rights can require an embargo period (months in which the deposited paper remains closed).
  - **Gold Open Access**: the publication in Open Access Journals, which are journals without subscription for readers, with transparent peer review and which leaves the rights to the authors; in 26% of cases they apply APC – Article Processing Charges – to support editorial costs.
- To guarantee the reuse, authors should choose open licenses (ie. [Creative Commons](#), which have 4 criteria: BY, SA, NC, ND)



# Deposit in literature Repository

- The possible versions are:
  - **PRE-PRINT**: your final draft, as submitted to the journal (does not have reviewers comments yet)
  - **POST-PRINT or ACCEPTED MANUSCRIPT**: the final version, with reviewers comments, identical to the published one except for the editorial layout
  - **EDITORIAL PDF or PUBLISHED VERSION**: the exact version published in the journal, with layout and graphic
- To know which version you can deposit and the eventual period of embargo, you can check [SHERPA-RoMEO](#) database
- To find an Open Access Journal and find out if charges APC (Article Processing Charges), you can check DOAJ, [Directory of Open Access Journals](#)



# 10 Myths around open scholarly publishing

**Myth 3**  
**Approval by peer review proves that you can trust a research article**

The current peer review system is prone to a number of flaws including corruption, human bias and ghostwriting

|                                                                                                                                          |                                                                                                                                            |
|------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Myth 1</b><br><b>Preprints will get your research 'scooped'</b>                                                                       | <b>Myth 6</b><br><b>Copyright transfer is required to publish and protect authors</b>                                                      |
| Preprints typically provide a time-stamp and a DOI, therefore establishing priority of discovery                                         | Copyright transfer procedures do not protect authors nor contribute to the advancement of scientific progress                              |
| <b>Myth 2</b><br><b>JIF and journal branding are measures of quality for researchers</b>                                                 | <b>Myth 7</b><br><b>Gold Open Access is synonymous with the APC business model</b>                                                         |
| The JIF is a flawed metrics that was never meant to be used for evaluation of research and researchers                                   | Most DOAJ-indexed journals do not have APCs and are funded from other sources, such as research institutes and grants                      |
| <b>Myth 3</b><br><b>Approval by peer review proves that you can trust a research article</b>                                             | <b>Myth 8</b><br><b>Embargo periods on 'green' OA are needed to sustain publishers</b>                                                     |
| The current peer review system is prone to a number of flaws including corruption, human bias and ghostwriting                           | Traditional journals can peacefully coexist with zero-embargo self-archiving policies on author manuscripts                                |
| <b>Myth 4</b><br><b>Without journal peer review, the quality of science suffers</b>                                                      | <b>Myth 9</b><br><b>Web of Science and Scopus are global databases of knowledge</b>                                                        |
| Researchers are more than responsible and competent enough to ensure their own quality control as part of intrinsic scientific integrity | Neither represent the sum of current global research knowledge including Africa, Latin America and Southeast Asia                          |
| <b>Myth 5</b><br><b>Open Access has created predatory publishers</b>                                                                     | <b>Myth 10</b><br><b>Publishers add no value to the scholarly communication process</b>                                                    |
| Predatory journals have been around for a long time before the recent push towards Open Access publishing                                | Publishers are responsible for quite some key functions, from peer-review management to production and archiving of final version articles |

**Myth 1**  
**Preprints will get your research 'scooped'**

Preprints typically provide a time-stamp and a DOI, therefore establishing priority of discovery

Tennant JP, Crane H, Crick T, Davila J, Enkhbayar A, Havemann J, Kramer B, Martin R, Masuzzo P, Nobes A, Rice C, Rivera-López BS, Ross-Hellauer T, Sattler S, Thacker P, Vanholsbeeck M. 2019. Ten myths around open scholarly publishing. *PeerJ*

Preprints 7:e27580v1 <https://doi.org/10.7287/peerj.preprints.27580v1>





European  
Commission

# European Commission and Open Science





# Open Science in Europe

- Rewards and Incentives
- Research Indicators and Next-Generation Metrics
- Future of Scholarly Communication
- European Open Science Cloud
- FAIR Data
- Research Integrity
- Skills and Education
- Citizen Science

## Integrated advice of the Open Science Policy Platform on 8 prioritised Open Science ambitions

[May 29, 2018](#)



[25 Apr. 2018](#)

Politiche nazionali e di ogni ateneo su  
Open Access e Open Data

Brussels, 25.4.2018  
C(2018) 2375 final

**COMMISSION RECOMMENDATION**

**of 25.4.2018**

**on access to and preservation of scientific information**



# European Open Science Cloud - EOSC

EOSC aims at creating a **virtual research environment** to access and interoperate **research data** and other research outputs in Europe across the different **disciplines**.

Più informazioni su

- > <https://ec.europa.eu/research/openscience/index.cfm?pg=open-science-cloud>
- > [www.eoscsecretariat.eu](http://www.eoscsecretariat.eu)
- > <https://www.eosc-portal.eu/>

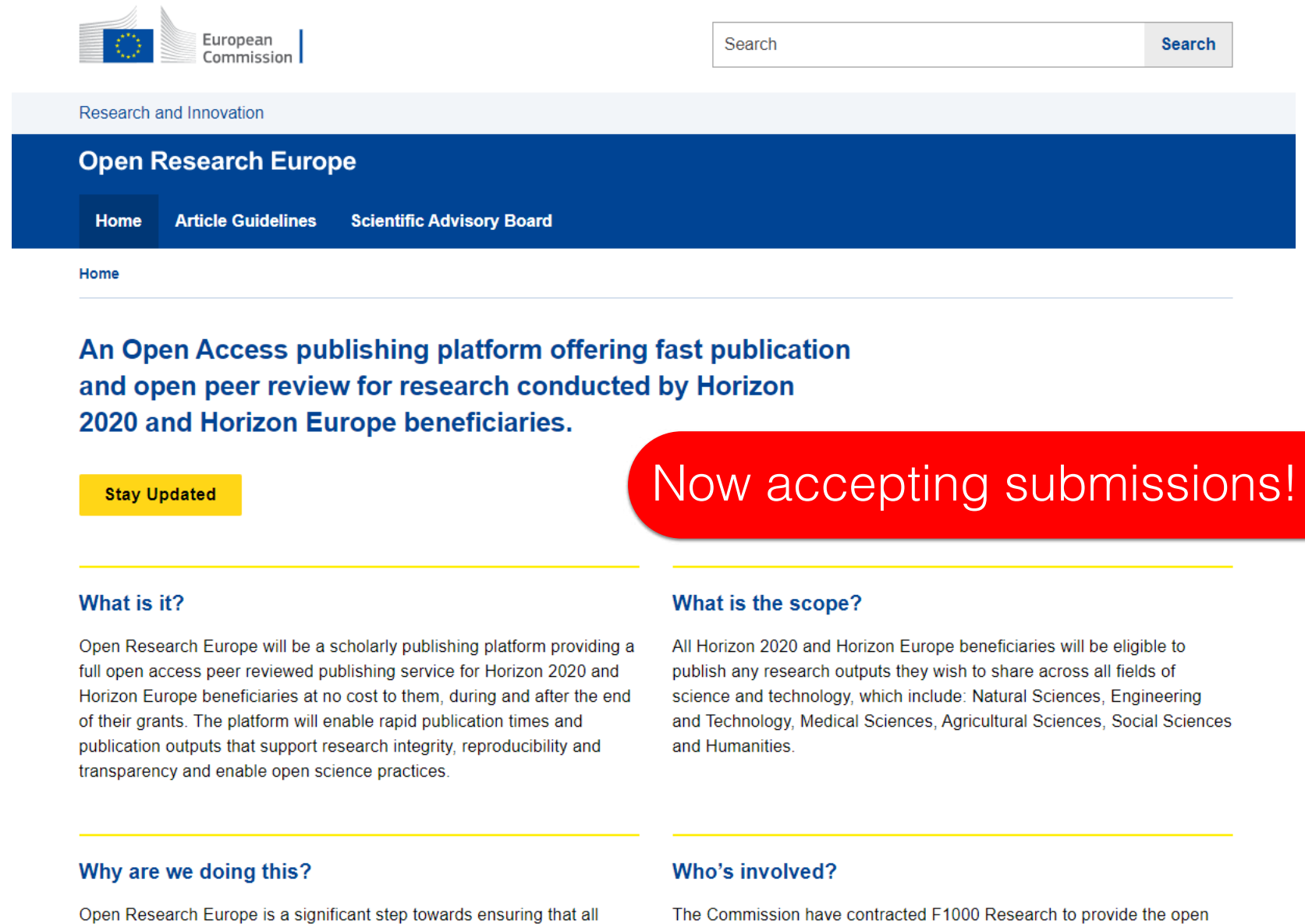




# European Commission Open Research Publishing Platform

## Launching in 2021

- Research publication platform for scientific papers – service dedicated to **EC funding beneficiaries**
- The platform will manage all the publication, post-publication, curation and preservation process
- **Open peer-review**
- Pre-prints and final versions of papers will be **open to the end users free of charge** (also non-scientists), and **licensed for re-use**
- **Full support of underlying data that meets the FAIR** (Findable, Accessible, Interoperable and Reusable) **principles** to enable reanalysis, replication and reuse, and thus improving reproducibility and increasing impact.



The screenshot shows the top of the Open Research Europe website. At the top left is the European Commission logo. To its right is a search bar with the text 'Search' and a 'Search' button. Below the logo is a blue banner with the text 'Research and Innovation' and 'Open Research Europe'. Underneath the banner is a navigation bar with links: 'Home', 'Article Guidelines', and 'Scientific Advisory Board'. Below the navigation bar is a section titled 'Home' with a sub-header 'An Open Access publishing platform offering fast publication and open peer review for research conducted by Horizon 2020 and Horizon Europe beneficiaries.' To the right of this section is a red button that says 'Stay Updated'. Below the sub-header are two columns of text. The left column is titled 'What is it?' and describes the platform as a scholarly publishing platform providing a full open access peer reviewed publishing service for Horizon 2020 and Horizon Europe beneficiaries at no cost to them, during and after the end of their grants. The right column is titled 'What is the scope?' and states that all Horizon 2020 and Horizon Europe beneficiaries will be eligible to publish any research outputs they wish to share across all fields of science and technology, which include: Natural Sciences, Engineering and Technology, Medical Sciences, Agricultural Sciences, Social Sciences and Humanities. Below these columns are two more sections: 'Why are we doing this?' and 'Who's involved?'. The 'Why are we doing this?' section states that Open Research Europe is a significant step towards ensuring that all. The 'Who's involved?' section states that The Commission have contracted F1000 Research to provide the open.

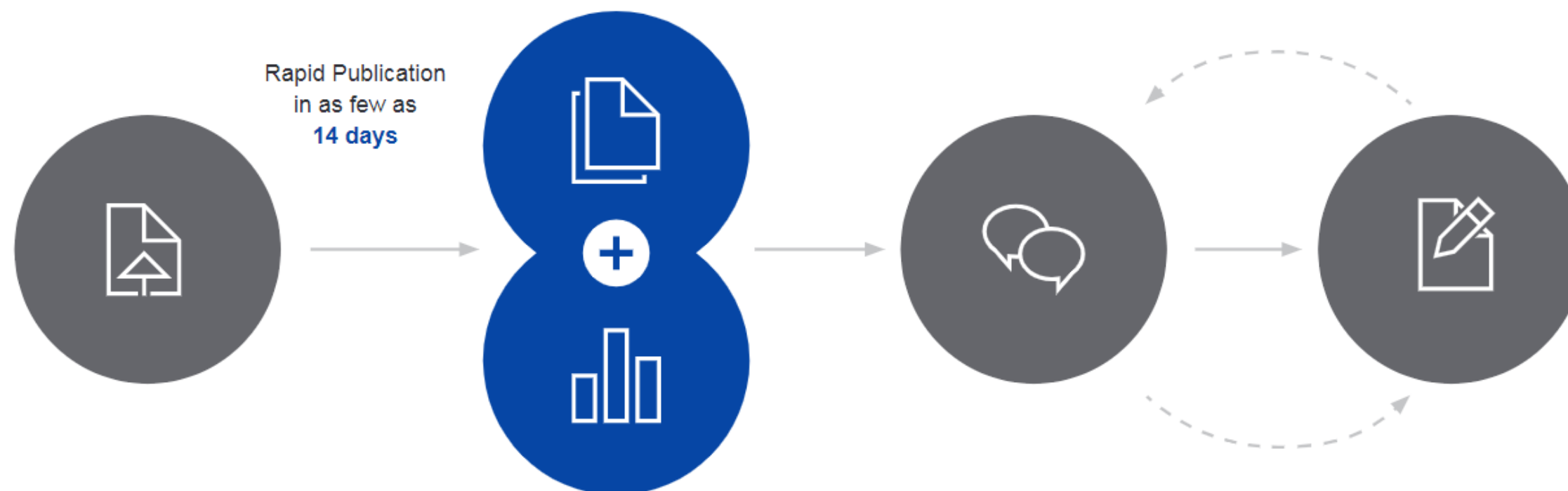
Now accepting submissions!

<https://open-research-europe.ec.europa.eu>





# ORE Publishing Model



## Article Submission

Submitting an article is easy with our single-page submission system. The in-house editorial team carries out a basic check on each submission to ensure that all policies are adhered to.

## Publication & Data Deposition

Once the authors have finalised the manuscript, the article (with its associated source data) is published, enabling immediate viewing and citation.

## Open Peer Review & User Commenting

Expert reviewers are selected and invited, and their reports and names are published alongside the article, together with the authors' responses and comments from registered users.

## Article Revision

Authors are encouraged to publish revised versions of their article. All versions of an article are linked and independently citable. Articles that pass peer review are indexed in external databases such as PubMed, Scopus and Google Scholar.

# ORE: Open Peer Review Example

[Home](#) » [Browse](#) » [Silent myelin-weighted magnetic resonance imaging](#)

METHOD ARTICLE [EDIT VERSION](#)

Check for updates

**REVISED** Silent myelin-weighted magnetic resonance imaging [version 2; peer review: 2 approved, 2 approved with reservations]

Tobias C. Wood <sup>1</sup>, Nikou L. Damestani<sup>1</sup>, Andrew J. Lawrence<sup>2</sup>, Emil Ljungberg <sup>1</sup>, Gareth J. Barker <sup>1</sup>, Ana Beatriz Solana<sup>3</sup>, Florian Wiesinger<sup>1,3</sup>, Steven C.R. Williams <sup>1</sup>

[+ Author details](#)

### Abstract

**Background:** Inhomogeneous Magnetization Transfer (ihMT) is an emerging, uniquely myelin-specific magnetic resonance imaging (MRI) contrast. Current ihMT acquisitions utilise fast Gradient Echo sequences which are among the most acoustically noisy MRI sequences, reducing patient comfort during acquisition. We sought to address this by modifying a near silent MRI sequence to include ihMT contrast.

**Methods:** A Magnetization Transfer preparation module was incorporated into a radial Zero Echo-Time sequence. Repeatability of the ihMT ratio and inverse ihMT ratio were assessed in a cohort of healthy subjects. We also investigated how head orientation affects ihMT across subjects, as a previous study in a single subject suggests this as a potential confound.

**Results:** We demonstrated that ihMT ratios comparable to existing, acoustically loud, implementations could be obtained with the silent sequence. We observed a small but significant effect of head orientation on inverse ihMTR.

**Conclusions:** Silent ihMT imaging is a comparable alternative to conventional, noisy, alternatives. For all future ihMT studies we recommend careful positioning of the subject within the scanner.

### Keywords

ALL METRICS

419  
VIEWS

52  
DOWNLOADS

Get PDF

Get XML

Cite

Export

Track

Email

Share

### Open Peer Review

Reviewer Status

#### Reviewer Reports

|                                   | Invited Reviewers |      |      |      |
|-----------------------------------|-------------------|------|------|------|
|                                   | 1                 | 2    | 3    | 4    |
| Version 2 (revision)<br>13 Aug 20 | read              |      | read |      |
| Version 1<br>21 Apr 20            | read              | read | read | read |

1. **Richard Dortch** , Barrow Neurological Institute, Phoenix, USA
2. **Olivier Girard** , Aix-Marseille University, Marseille, France  
**Lucas Soustelle** , Aix-Marseille Univ, CNRS, CRMBM UMR 7339, Marseille, France; SATT Sud-Est, Marseille, France
3. **Douglas Dean** , University of Wisconsin-Madison, Madison, USA; University of Wisconsin-Madison, Madison, USA; University of Wisconsin-Madison, Madison, USA
4. **Gunther Helms** , Lund University, Lund, Sweden

Alongside their report, reviewers assign a status to the article:

#### APPROVED

The paper is scientifically sound in its current form and only minor, if any, improvements are suggested

#### APPROVED WITH RESERVATIONS

Key revisions are required to address specific details and make the paper fully scientifically sound

#### NOT APPROVED

Fundamental flaws in the paper seriously undermine the findings and conclusions

## Visibility & credit for reviewers:

- Co-reviewing
- ORCID ids
- DOIs for reports



# Plan-S



Plan S is an initiative for Open Access publishing that was launched in September 2018. The plan is supported by cOAlition S, an international consortium of research funders. Plan S requires that, **from 2021, scientific publications that result from research funded by public grants must be published in compliant Open Access journals or platforms.**



# cOAlition S

Funders that have endorsed Plan S and jointly working on its implementation

Supported by



National funders



Charitable and international funders



European funders



Join the coalition



# Consequences of Plan-S

## Transformative agreements:

- Large Institutions or Countries contracted different publishing models to allow their researchers to publish in OA all their works
- Publish and Read contracts
- Transparency on the contracts contents

### Open Access Publishing in Springer Nature Journals

FinELib consortium's agreement with Springer Nature includes open access publishing in Springer's hybrid titles during the agreement term 1.10.2018–31.12.2020.

The author does not need to pay an APC (article processing charge). The charges are covered by the agreement.

### Transformative agreements and Open Access. An example from Germany

Germany's Projekt DEAL and the publisher John Wiley & Sons have entered a **ground-breaking transformative agreement**, in line with the objectives of the Open Access 2020 initiative.

Under this new agreement, all authors affiliated with 700 academic institutions in Germany will retain copyright and their accepted articles will be published open access in Wiley journals. Almost 10,000 articles by German researchers are published a year in Wiley journals, constituting around 9% of the publisher's total output. The agreement also grants students and faculty read access to the full Wiley journal portfolio including backfiles starting with 1997. The national-level agreement is based on a "Publish&Read" model in which fees are paid by institutions-not for subscriptions but for open access publishing services.

The **agreement** has been open to the public since 18/02/2019.

Springer Nature and the Austrian Academic Library Consortium renew open access contract for another three years

Researchers and students in Austria continue to benefit from the proven "Read & Publish" model. | The agreement combines the opportunity to publish open access in more than 1,900 Springer journals with access to more than 2,000 subscription journals.

### Cambridge University Press and the University of California Agree to Open Access Publishing Deal

By admin / April 10, 2019



### Springer Nature agrees new transformative deal with Norway

London, 27 June 2019

Springer Nature and the Unit consortium in Norway have agreed in principle a transformative read and publish deal for 2020-2022. This will allow researchers in Norway to read articles in journals on SpringerLink and Norwegian authors to publish Open Access (OA) in all of Springer Nature's Open Choice portfolio of hybrid journals, meaning all primary research articles with corresponding authors from Norway will be open and immediately available from the point of publication.

In addition, an agreement has been reached to ensure all Unit members are able to continue to access research published in Springer journals throughout 2019.

Complete list at: <https://esac-initiative.org/about/transformative-agreements/agreement-registry/>



# Transformative agreements in Italy

- **CRUI:** agreements with a group of publishers already in place (Springer, ACS, Cambridge UP, emerald, De Gruyter, Wiley, Elsevier), others are under development.
  - Reactions from the Open Science community: AISA - Associazione Italiana per la promozione della Scienza Aperta, University of Milan.
- **CNR:** Read&Publish agreements signed with AIP, IEEE, and RSC. CNR team estimated the number of articles published, and the overall cost for both subscriptions and APC for each publisher in the last 3 years.

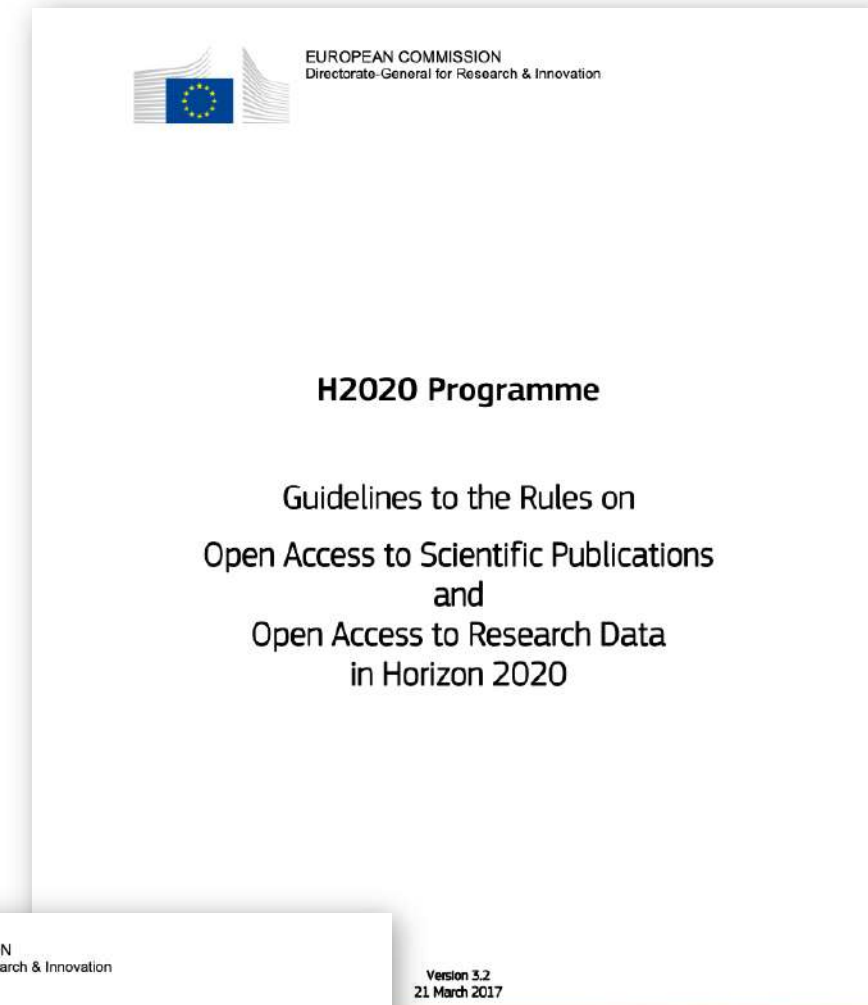


# H2020: guides and legal basis

Art. 29.2 e 29.3 of the Model Grant Agreement

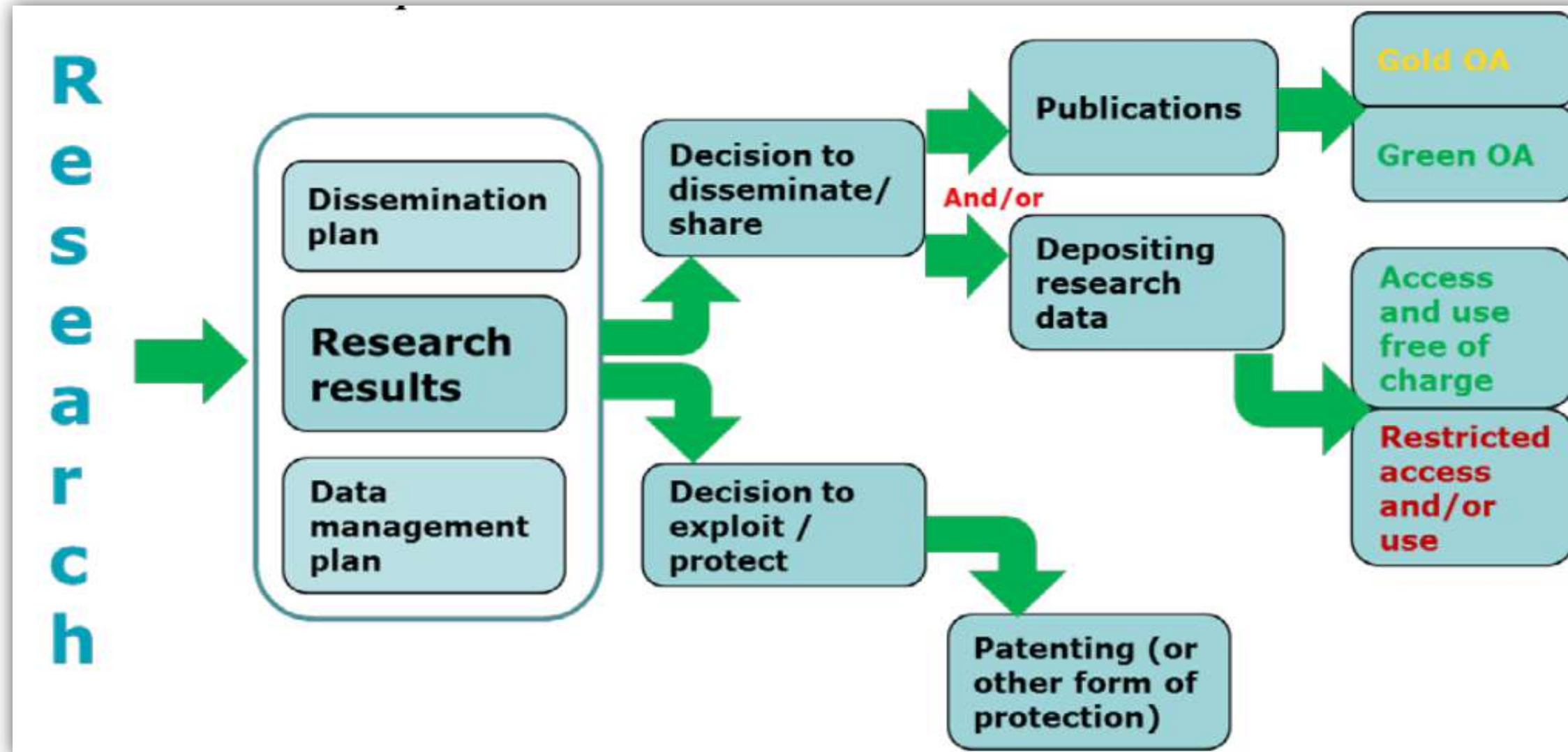
Guidelines to the Rules on Open Access to Scientific Publications and Open Access to Research Data in Horizon 2020

H2020 Programme Guidelines on FAIR Data Management in Horizon 2020



# H2020 beneficiaries

Must decide whether to patent or publish



Guidelines to the Rules on Open Access to Scientific Publications and  
Open Access to Research Data in Horizon 2020



# EC Open Access Mandate to Scientific Publications



- **Open by mandate:** each beneficiary must ensure open
- access to all peer-reviewed scientific publications relating to its results.
- Embargo period: at most 6 months (12 months for publications in the social sciences and humanities).
- **What to deposit?**
  - Post Print or Editorial Version (machine-readable electronic copy)
  - Metadata must contain project coordination (name of the action, acronym and grant number)
- **Where to deposit?**
  - A repository that is compliant to OpenAIRE guidelines

***Open by  
mandate***



# EC mandate on Open Access to research data



- **Open by default** (“Opt Out” always possible)
- **What to deposit**
  - Data produced by funded research that led to a scientific publication, but in general all types of data
  - Metadata with reference to the project
- **Where to deposit**
- A repository that is compliant to OpenAIRE guidelines
- **What to produce**
  - Data Management Plan

***As Open As Possible  
As Closed As Necessary***

# «Opt Out» option of Open Data Pilot (ODP)



## **Industrial or commercial exploitation**

Participation in the ODP is incompatible with the duty to protect results that can be reasonably exploited commercially or industrially



## **Security**

Participation in the ODP is incompatible with the need for confidentiality related to security issues



## **Personal Data Protection**

Participation in the ODP is incompatible with the rules on personal data protection



## **Achievement of project objectives**

Participation in the ODP is incompatible with the achievement of project targets



## **No Data Produced/Gathered**

The project doesn't require creating or gathering the data of the research

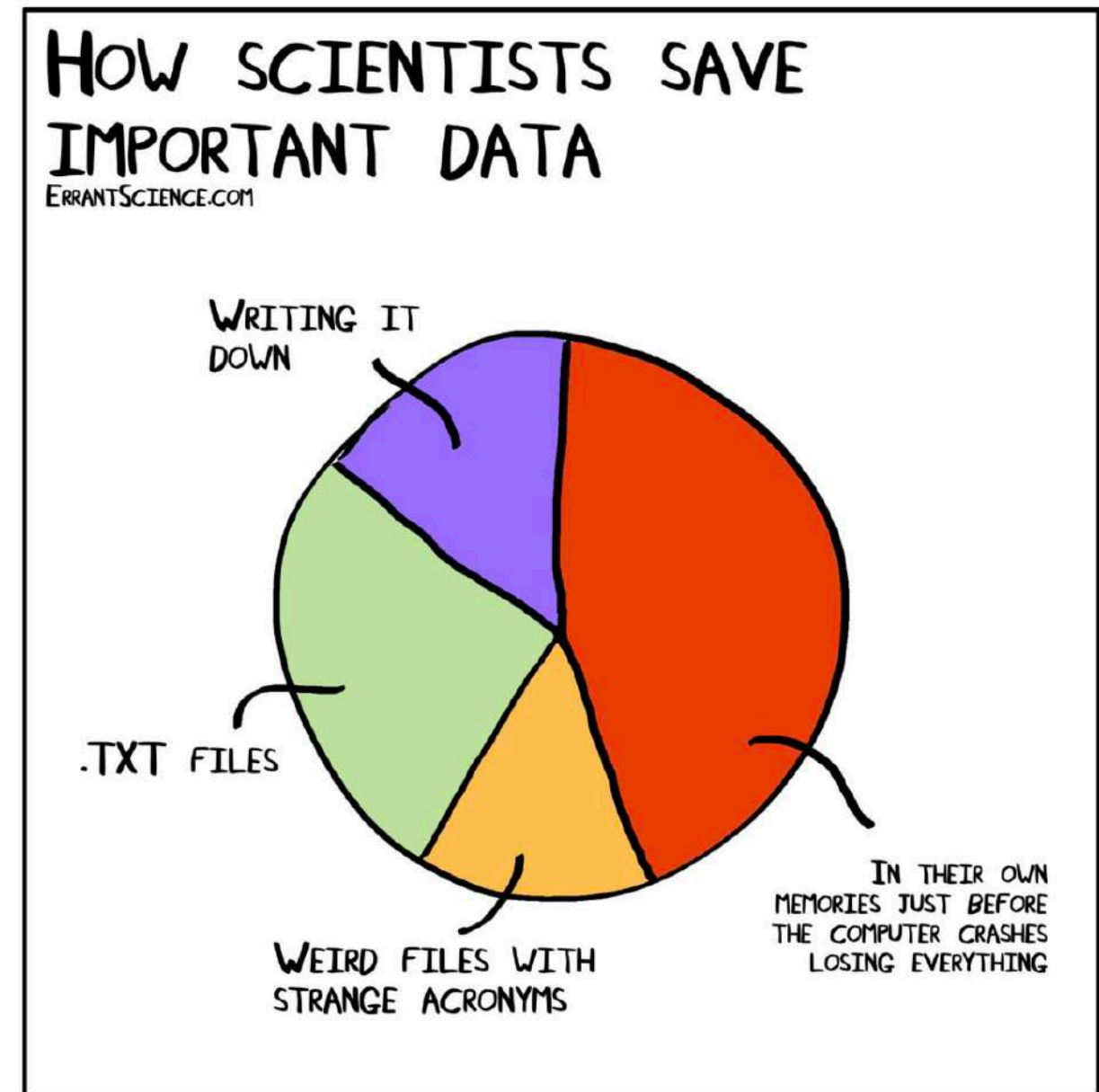


## **Other Legitimate Reasons**

There are other legitimate reasons (to motivate in the proposal or in the Data Management Plan)

# Research Data Management

- European Commission policies aims to spread correct aspects of **research data management**
- A **Data Management Plan** is required (mandatory deliverable within month 6)
- You need to make your data compliant with the FAIR principles even if you will not assign Open Access rights to it.





# Data must be FAIR

## Findable

it should be clear where data are located and can be cited!

## Interoperable

Data should be easily integrated with other data, machine readable, and linked to other research results

## Accessible

For at least 10 years! It does not mean that data is open, but it must be clear who and how can access the data.

## Reusable

usable for re-analysis or new research (transparency, integrity)

***FAIR does not mean Open***

# Once your data is FAIR, open it!



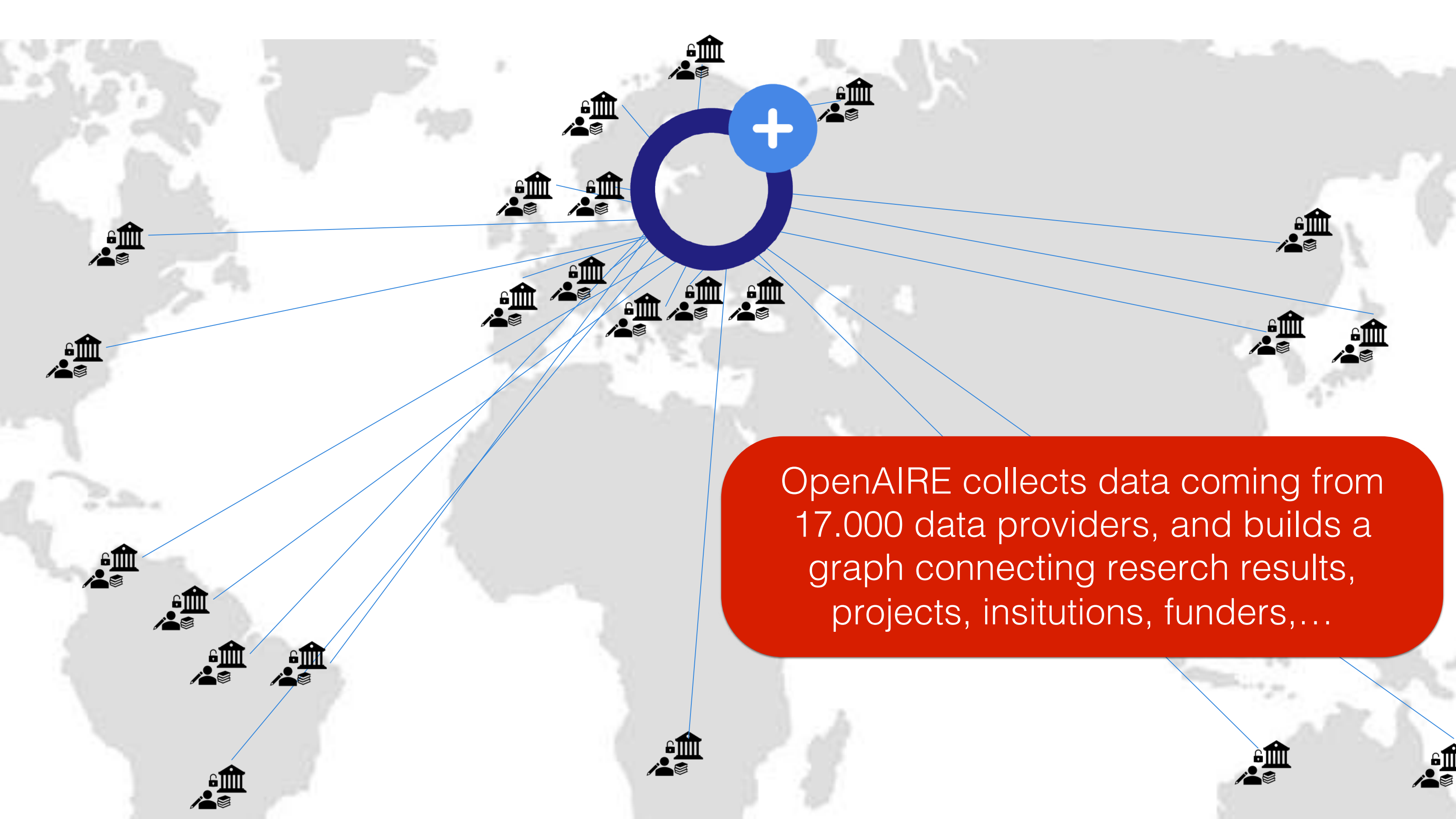
From 2014 until 2019, Moedas served as European Commissioner covering the portfolio of Research, Science and Innovation under the leadership of President Jean-Claude Juncker

# Be aware of possible **Sanctions!**

*Grant reduction or payment  
suspension  
[Art. 43 of the Grant Agreement]*







OpenAIRE collects data coming from 17.000 data providers, and builds a graph connecting research results, projects, insitutions, funders,...



Content Providers 17.000  
Publications 40.000.000  
Projects 3.000.000  
Datasets 10.000.000  
Software 230.000  
Funders 21

# Different perspectives of the OpenAIRE Graph

## Institution

 OpenAIRE | EXPLORE

 UNIGE

Università degli Studi di Genova

Organization Italy

|                       |   |
|-----------------------|---|
| Publications (0)      | + |
| Projects (154)        | + |
| Content Providers (1) | + |

## Repository

 OpenAIRE | EXPLORE

 Archivio istituzionale della ricerca - Università di Genova

Institutional Repository OpenAIRE 3.0 (OA, funding)

OAI-PMH: <https://iris.unige.it/oai/request?> →

Detailed content provider information (OpenDOAR) →

Countries: Italy

|                             |   |
|-----------------------------|---|
| Publications (262)          | + |
| Research Data (0)           | + |
| Software (0)                | + |
| Other Research Products (1) | + |
| Organizations (1)           | + |
| Statistics                  | + |
| Metrics                     | + |

## Project

 OpenAIRE | EXPLORE

DexROV

Dexterous ROV: effective dexterous ROV operations in presence of communication latencies. (635491)

Project EC Open Access mandate for Publications

Funding: H2020 | RIA

Start Date: 2015-03-01

End Date: 2018-08-31

Open Access mandate for Research Data: no

Organization: EQ GRAAL TECH UNIGE JacobsUni SPACEAPPS IDIAP COMEX

Detailed project information (CORDIS) →

|                             |   |
|-----------------------------|---|
| Publications (27)           | + |
| Research Data (0)           | + |
| Software (0)                | + |
| Other Research Products (0) | + |
| Statistics                  | + |
| Metrics                     | + |

## Product

 OpenAIRE | EXPLORE

Interaction of hydrophobic polymers with model lipid bilayers

Article English OPEN

Bochicchio, D. ; Panizon, E. ; Monticelli, L. ; Rossi, G. (2017)

Publisher: Nature Publishing Group UK

Journal: Scientific Reports, volume 7 (eissn: 2045-2322)

Related identifiers: [pmc: PMC5526983](#), [doi: 10.1038/s41598-017-06668-0](#)

Subject: Article

The interaction of nanoscale synthetic materials with cell membranes is one of the key steps determining nanomaterials' toxicity. Here we use molecular simulations, with atomistic and coarse-grained resolution, to investigate the interaction of three hydrophobic polymers with model lipid membranes. Polymer nanoparticles made of polyethylene (PE), polypropylene (PP) and polystyrene with size up to 7 nm enter easily POPC lipid membranes, localizing to the membrane hydrophobic core. For all three materials, solid polymeric nanoparticles become essentially liquid within the membrane at room temperature. Still, their behavior in the membrane core is not the same: PP and

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## OpenAIRE-Advance

OpenAIRE Advancing Open Scholarship (777541)

PROJECT EC OPEN ACCESS MANDATE FOR PUBLICATIONS AND RESEARCH DATA

Funding: H2020 | RIA

Start Date: 2018-01-01

End Date: 2020-12-31

Organization: LU SDU

ATHENA RC University of

UZH UOA IYTE IMI BAS

NHRF (EIE) CLARA UL

COAR e.V. OLH KTU U

UGOE UIO TU Delft CN

Detailed project information

Publications (19)

Research Data (1)

Software (2)

Other Research Products (1)

Statistics

Metrics

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Application Box

Publications

Research Data

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Grant Management

777541 (OpenAIRE-Advance) RIA

Call: H2020-EINFRA-2016-2017

Topic: EINFRA-12-2017

Unit: CNECT/C/01

Summary for publication

Deliverables Ethics, DMP, Other Reports

Milestones

Critical Risks

Publications

Disseminat...

Patents (IPR)

Infrastruct...

Open Data

Gender

ABS Regulation

Project Continuous Report

n0025nhm (EXTERNAL)

90Camd

Publications

☐ This project does not currently have any scientific publication

Suggested publications from OpenAIRE (19 publications)

| No. | Type               | Title                                                                           | Authors                                        | Title of the Journal/Proc./Book | Date of Acceptance | DOI                                                                                                                                                        | Repository Link      | Actions |
|-----|--------------------|---------------------------------------------------------------------------------|------------------------------------------------|---------------------------------|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|---------|
| 1   | Other              | OpenAIRE's DOIBoost - Boosting CrossRef for Research                            | La Bruzzo, Sandro; Manghi, Paolo; Mannocci, Ar |                                 | 01/10/2018         | <a href="https://doi.org/10.5281/zenodo.1492766">10.5281/zenodo.1492766</a><br><a href="https://doi.org/10.5281/zenodo.1441058">10.5281/zenodo.1441058</a> | <a href="#">Link</a> |         |
| 2   | Article in Journal | Editorial - Welcoming the first European peer review scientific journal created | Alikí Giannakopoulou                           |                                 | 23/11/2018         | <a href="https://doi.org/10.5281/zenodo.1494901">10.5281/zenodo.1494901</a><br><a href="https://doi.org/10.5281/zenodo.1494902">10.5281/zenodo.1494902</a> | <a href="#">Link</a> |         |
| 3   | Article in Journal | School's contribution to prevention of earthquakes                              | Goergia Drakoulakou                            |                                 | 29/11/2018         | <a href="https://doi.org/10.5281/zenodo.1684547">10.5281/zenodo.1684547</a><br><a href="https://doi.org/10.5281/zenodo.1684548">10.5281/zenodo.1684548</a> | <a href="#">Link</a> |         |
| 4   | Other              | OpenAIRE Data Management Plan                                                   | Horst, Marek; Starczewski, Michał              |                                 | 08/07/2018         | <a href="https://doi.org/10.5281/zenodo.1699116">10.5281/zenodo.1699116</a><br><a href="https://doi.org/10.5281/zenodo.1699117">10.5281/zenodo.1699117</a> | <a href="#">Link</a> |         |
| 5   | Article in Journal | Analysis and characterization of extra virgin olive oils                        | Andrea Chechetti; Martano Donato; Veltri Rosa  |                                 | 29/11/2018         | <a href="https://doi.org/10.5281/zenodo.1685819">10.5281/zenodo.1685819</a><br><a href="https://doi.org/10.5281/zenodo.1685820">10.5281/zenodo.1685820</a> | <a href="#">Link</a> |         |

Project publications (2 publications)

[Manually add publication](#)

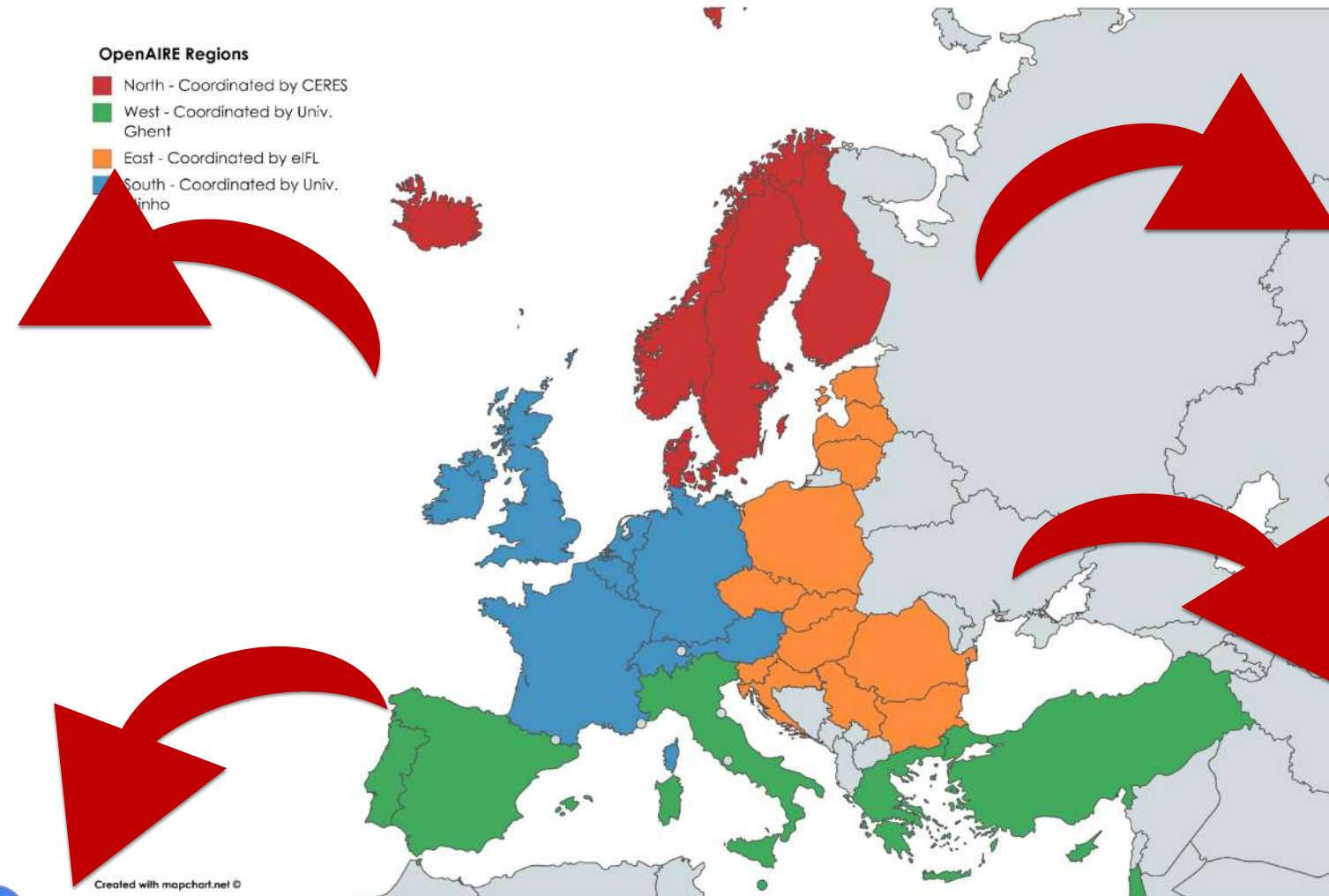
| No. | Type           | Title                                                                 | Authors                                     | Title of the Journal/Proc./Book                        | Number, date or freq. of the Journal/Proc./Book | Is Peer-reviewed? | Is Open Access? | DOI                                                                             | Repository Link      | Actions |
|-----|----------------|-----------------------------------------------------------------------|---------------------------------------------|--------------------------------------------------------|-------------------------------------------------|-------------------|-----------------|---------------------------------------------------------------------------------|----------------------|---------|
| 1   | Publication in | GDup: De-Duplication of Scholarly Communication Big Graphs            | Claudio Atzori, Paolo Manghi, Alessia Bardi | 2018 IEEE/ACM 5th International Conference on Big Data |                                                 | Yes               | No              | <a href="https://doi.org/10.1109/bdcat.2018.00025">10.1109/bdcat.2018.00025</a> | <a href="#">Link</a> |         |
| 2   | Chapter in a B | A nyílt hozzáféréstől a nyílt tudomány felé OpenAIRE-Advance (2018-20 | Judit Fazekas-Paragh, Gyöngyi Karácsony     | NETWORKSHOP 2018 konferenciakiadvány                   |                                                 | Yes               | Green           | <a href="https://doi.org/10.31915/nws.2018.5">10.31915/nws.2018.5</a>           | <a href="#">Link</a> |         |

Information is sent directly to the participant portal for scientific and financial reporting

# National Open Access Desks (NOADs)

## Facts

- Research is global, support is local
- Diversity in culture & maturity of national/local infras
- Not one size fits all in OA and open science



**Our pan-European network**

**→ 34 countries**

**Key national organizations**

**→ 4 area coordinators**

# OpenAIRE NOAD in Italy

**Elena Giglia**

Unità di progetto Open Access  
Direzione Ricerca e Terza Missione  
Universita' degli Studi di Torino



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**Emma Lazzeri, Gina Pavone**

CNR – Istituto di Scienze e  
Tecnologie dell'Informazione  
Pisa

*Please contact us for any  
information or  
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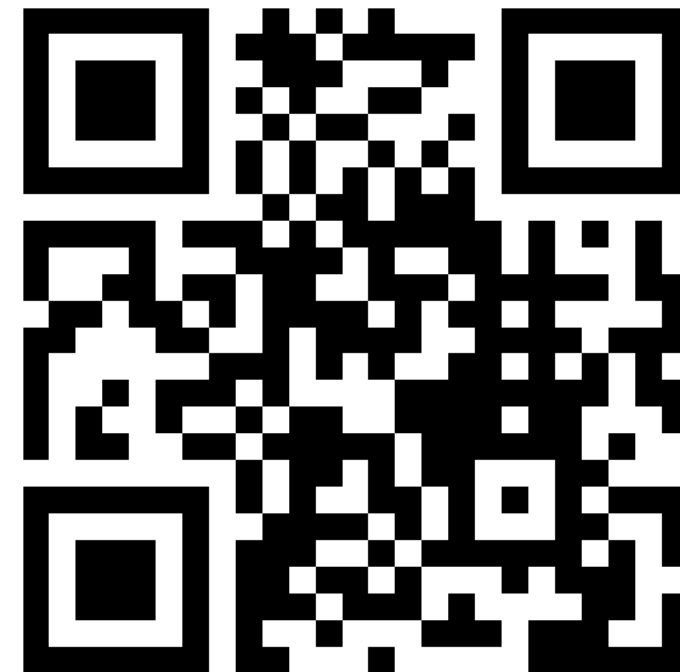


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- Scan the QR code



# Thank you!

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