



UNIVERSITAT DE  
BARCELONA

Jornada de Formació de Professorat  
Facultat de Física i Facultat de Química  
Universitat de Barcelona  
9 de febrer de 2022

# Ciència Oberta: Més enllà de publicar en accés obert

Ignasi Labastida i Juan  
Delegat del rector per a la ciència oberta  
Universitat de Barcelona



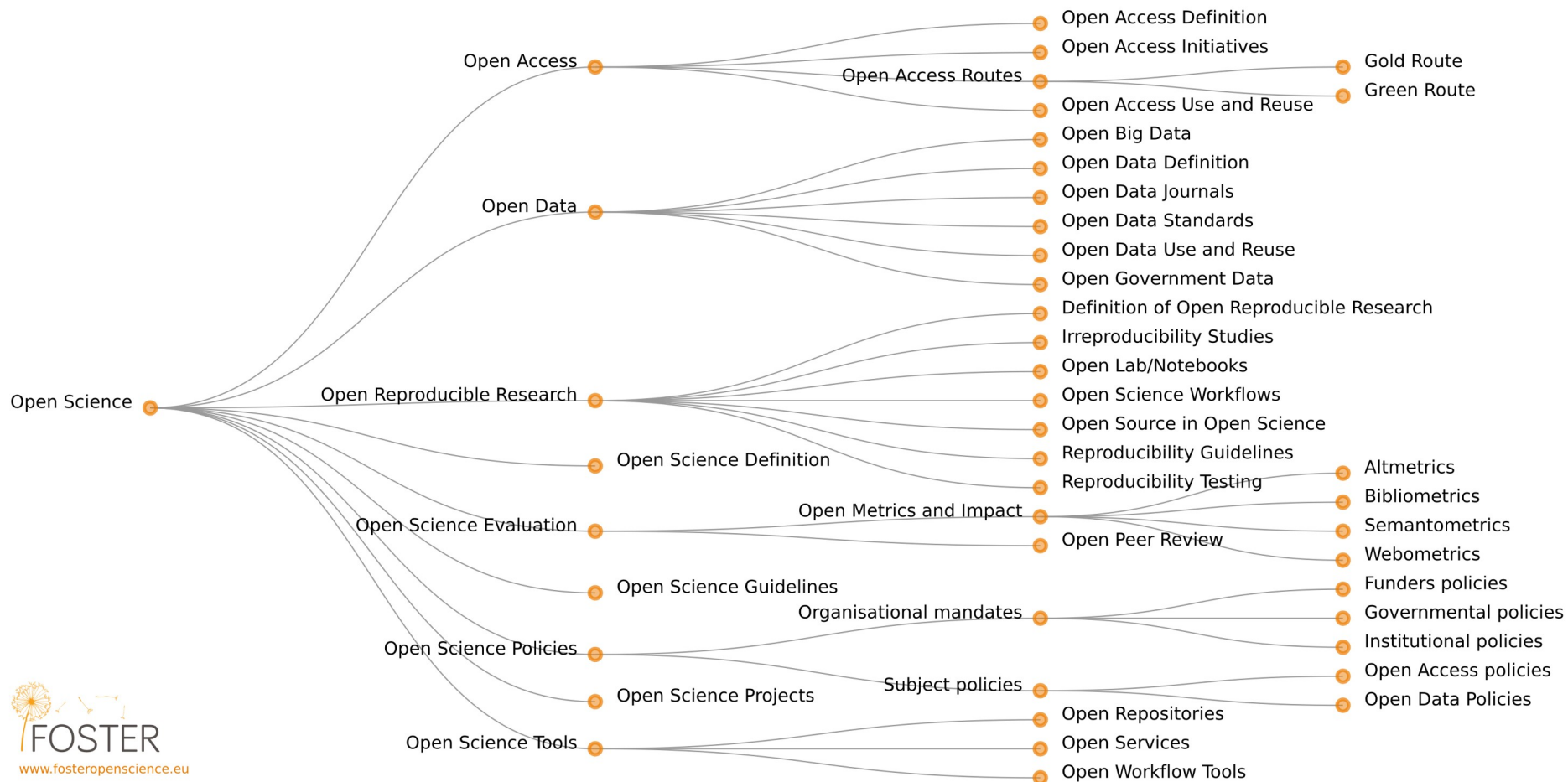
# De la ciència 2.0...



J. C. Burgelman, Comissió Europea, Science 2.0

# ... a la ciència oberta

## Open Science Taxonomy



# Definicions diverses...

Open Science aims at transforming science through ICT tools, networks and media, to make research more open, global, collaborative, creative and closer to society

<https://ec.europa.eu/digital-agenda/en/open-science>

Open science is the movement to make scientific research and its dissemination accessible to all levels of an inquiring society, amateur or professional

[https://en.wikipedia.org/wiki/Open\\_science](https://en.wikipedia.org/wiki/Open_science)

... i una definició clara

**OPEN SCIENCE:  
JUST  
SCIENCE  
DONE RIGHT**

CCO Melanie Imming & Jon Tennant  
<http://doi.org/10.5281/zenodo.1285575>

En quins àmbits veiem canvis?

# L'aproximació de la CE: vuit pilars

The future of Scholarly Communications

FAIR Data

European Open Science Cloud

Incentives and Rewards

New generation metrics

Research Integrity

Education and Skills

Citizen Science

# Vuit pilars reduïts a sis àmbits

Scientific Publications

Research Data

Research Evaluation

Research Integrity

Skills and Education

Social Impact and Public Participation in Research



# Crides, fulls de ruta, compromisos...

**Amsterdam Call for Action on Open Science**

**LE RU** PUSHING THE FRONTIERS OF INNOVATIVE RESEARCH

ADVICE PAPER  
No.24 - MAY 2018

Open Science and its role in universities:  
A roadmap for cultural change

Compromisos de las universidades ante la **Open Science**

**LEU** 2016

LEAGUE OF EUROPEAN RESEARCH UNIVERSITIES

University of Amsterdam • Universitat de Barcelona • University of Cambridge • University of Copenhagen • Trinity College • University of Edinburgh • University of Freiburg • Université de Genève • Universität Heidelberg • University of Helsinki • Universiteit Leiden • KU Leuven • Imperial College London • University College London • Lund University • University of Ludwig-Maximilians-Universität München • University of Oxford • Sorbonne University • Université Paris-Sud • University of Strasbourg • Utrecht University • University of Zurich

crue  
Universidades Españolas

# Crides, fulls de ruta, compromisos...

Objectius similars:

Accés obert complet a les publicacions científiques

Reutilització òptima de les dades de recerca

Amb

Un canvi cultural intern i extern

Canvis en l'avaluació de la recerca

Alineament de polítiques i intercanvi de bones pràctiques

# Reptes per a la nostra institució

Entendre les implicacions de la ciència oberta

Preparar la institució per al canvi

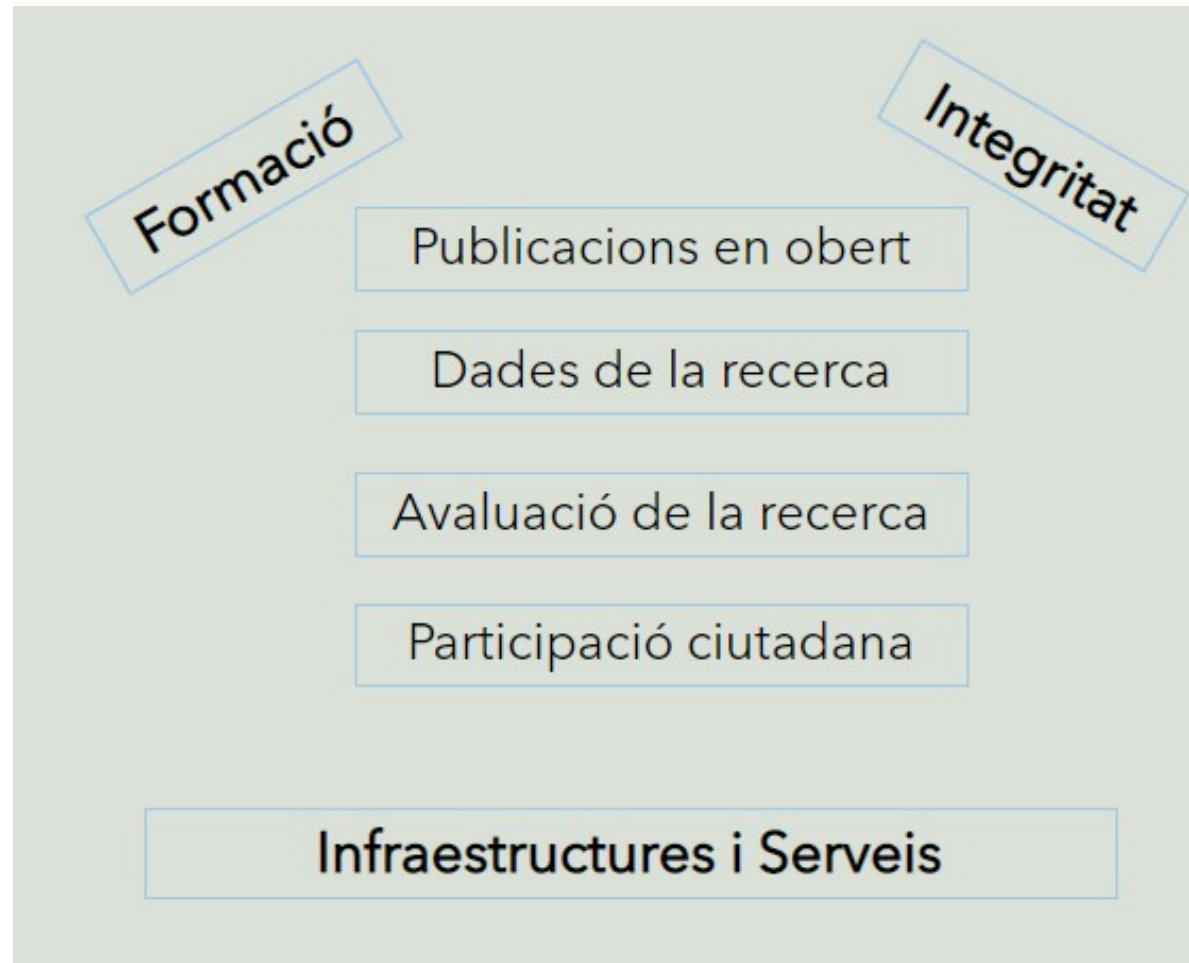
Reconèixer noves maneres de fer recerca

Millorar infraestructures i serveis

Compartir resultats i bones pràctiques

Reformular l'avaluació de la recerca

# Àrees d'actuació



# Publicacions

# Canvis externs

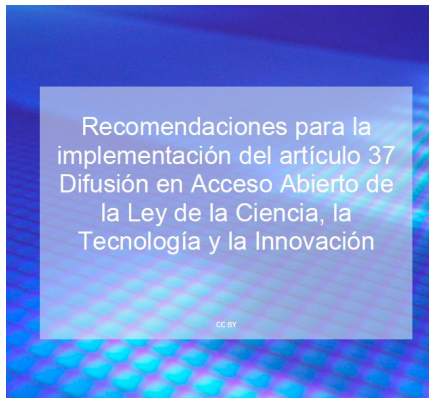
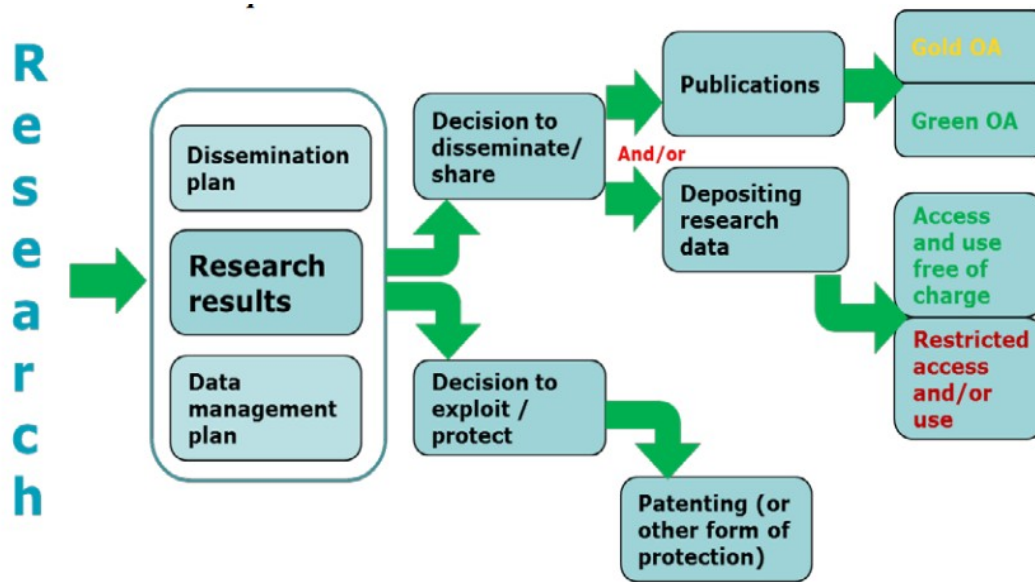


«I am committed to completing the transition to open access by 2020»

*Carlos Moedas, Frankfurt,  
October 18th, 2016*

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<https://www.flickr.com/photos/uclmaps/16916477742/>

# Canvis externs



Introducing  
**Open Research Europe**  
the European Commission's dedicated open access publishing platform for Horizon 2020 beneficiaries

Launching 2021

European Commission | Powered by FICCO Research

**cOAlition S**  
Making Open Access a reality by 2020

A DECLARATION OF COMMITMENT BY PUBLIC RESEARCH FUNDERS

<http://scieur.org/coalition-s>

# Respostes internes



Dipòsit Digital de la Universitat de Barcelona

## Dades per al Dipòsit Digital de la UB

*Dalton Transactions*

Política d'autoarxiu (2019): permet el dipòsit de la **versió POSTPRINT** ⓘ

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## Dades per al Dipòsit Digital de la UB

*Pure and Applied Chemistry*

Política d'autoarxiu (2019): permet el dipòsit de la **versió PUBLICADA** ⓘ

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# Respostes internes



Dipòsit Digital de la Universitat de Barcelona



PROF. SANTI NONELL (Orcid ID: 0000-0002-8900-5295)

Article type : Special Issue Research Article

## NanoDCFH-DA: A Silica-based Nanostructured Fluorogenic Probe for the Detection of Reactive Oxygen Species\*

Roger Bresolí-Obach<sup>1,†</sup>, Luis Busto-Moner<sup>1,†</sup>, Claudia Muller<sup>2</sup>, Manuel Reina<sup>2</sup>, Santi Nonell<sup>1\*</sup>

<sup>1</sup> Institut Químic de Sarrià, Universitat Ramon Llull, Via Augusta 390, 08017 Barcelona, Spain

<sup>2</sup> Celltec UB, Faculty of Biology, University of Barcelona, Diagonal 643, 08028 Barcelona, Spain

\*These authors contributed equally to this work.

<sup>†</sup>This article is part of a Special Issue dedicated to Dr. Norman "Andi" Garcia on the occasion of his retirement.

\*Corresponding author's e-mail: santi.nonell@iqs.ur.edu (Santi Nonell)

### ABSTRACT

A biocompatible fluorescent nanoprobe for detection of reactive oxygen species in biological systems has been designed, synthesized, and characterized, circumventing some of the limitations of the molecular probe diacetyl 2',7'-dichlorodihydrofluorescein (DCFH-DA). It has been synthesized the nanoparticulate form of DCFH-DA by covalently attaching the widely-used fluorescent probe DCFH-

This article has been accepted for publication and undergone full peer review but has not been through the copyediting, typesetting, pagination and proofreading process, which may lead to differences between this version and the Version of Record. Please cite this article as

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National Center for Biotechnology Information

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> Photochem Photobiol. 2018 Nov;94(6):1143-1150. doi: 10.1111/php.13020. Epub 2018 Oct 13.

## NanoDCFH-DA: A Silica-based Nanostructured Fluorogenic Probe for the Detection of Reactive Oxygen Species

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Affiliations + expand

PMID: 30240026 DOI: 10.1111/php.13020

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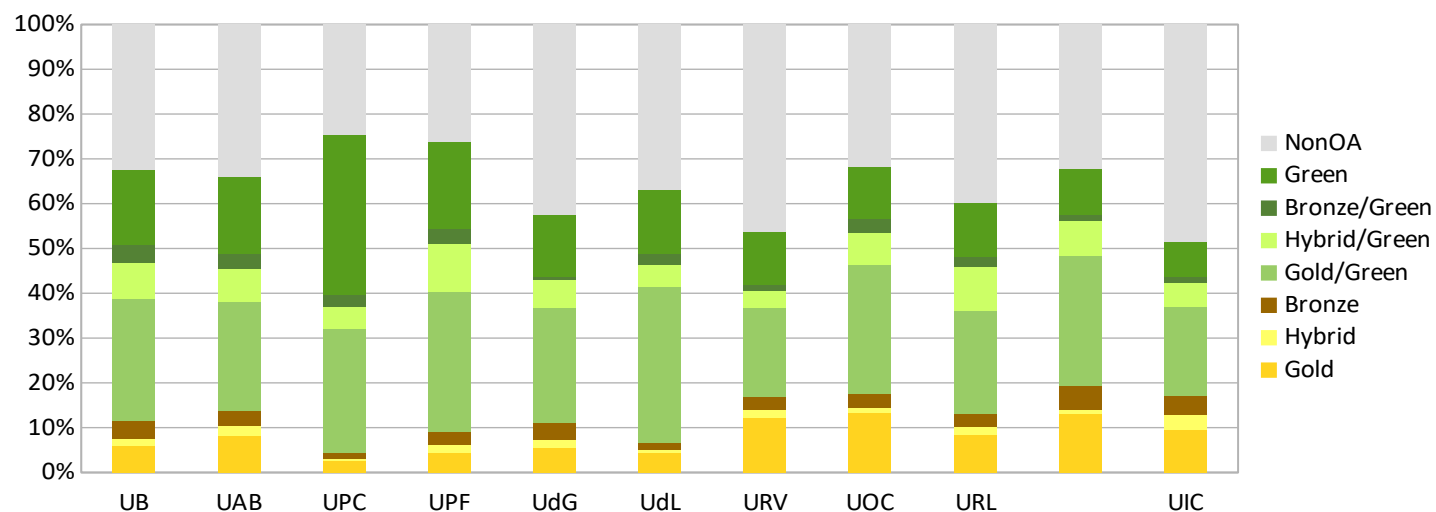
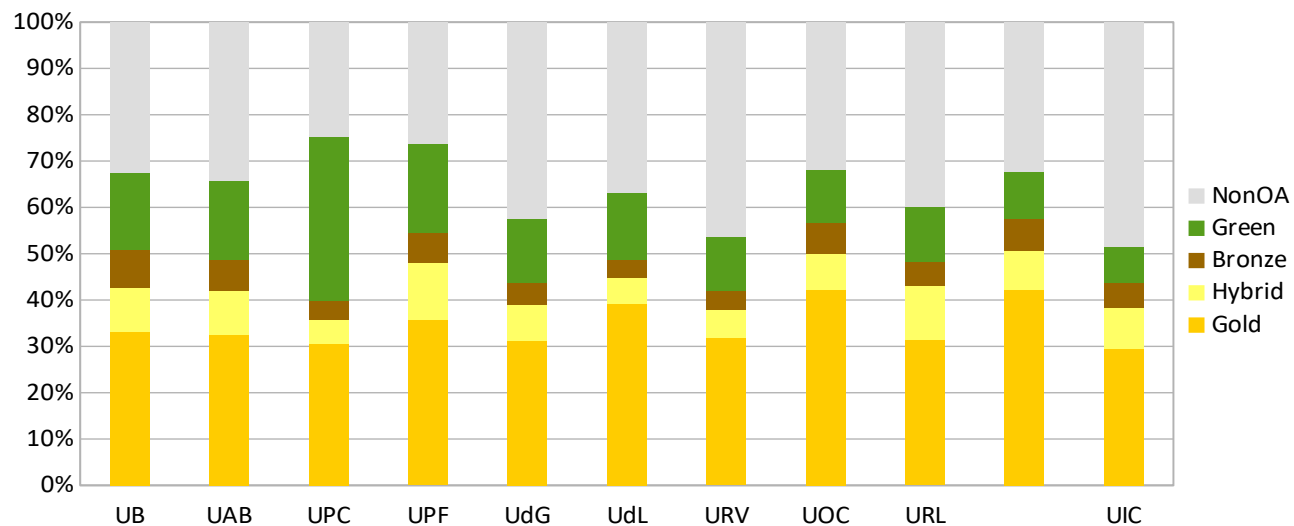
Favorites

# Respostes internes

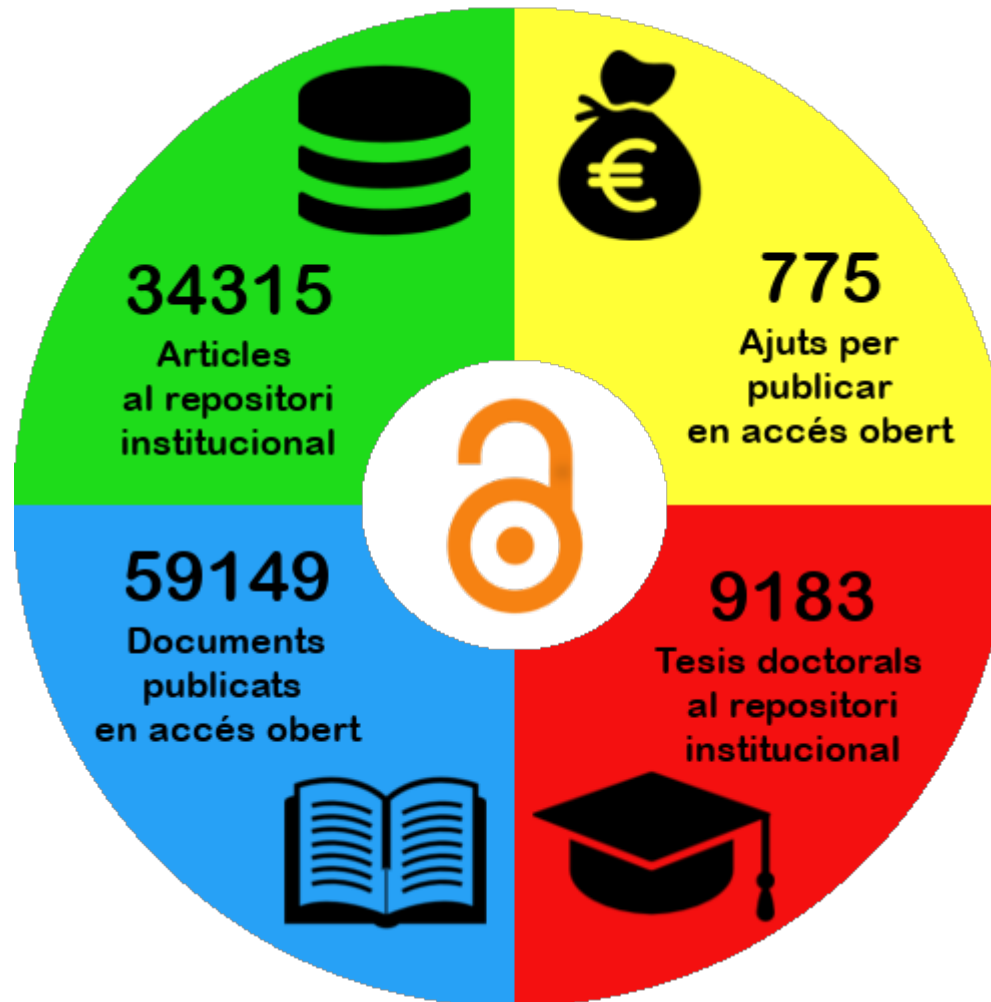
**RCUB** Revistes científiques  
de la Universitat de Barcelona



# Resultats



# Resultats



# Nous reptes: acords transformatius



# Nous reptes: acords transformatius

Acords estatals fins al 2024

ACS, Elsevier, Springer, Wiley

Acords a la UB

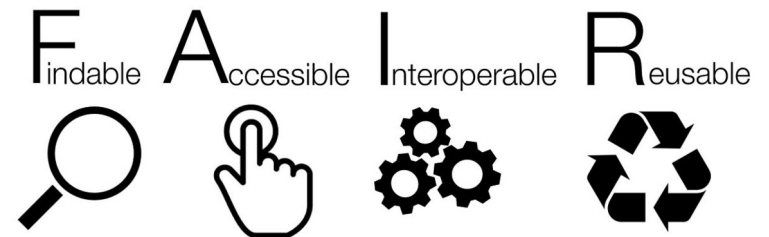
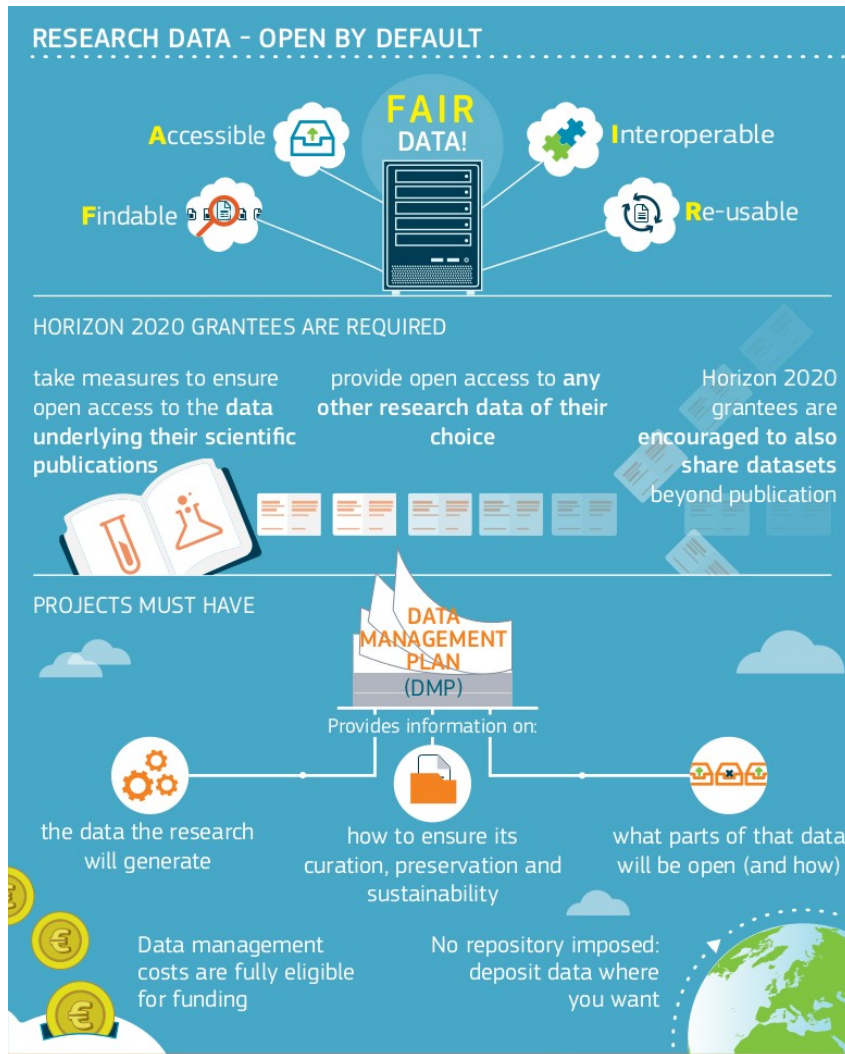
Cambridge University Press, Rockefeller University Press,  
The Company of Biologists

Al 2021 s'han publicat quasi 500 articles en obert

<https://crai.ub.edu/ca/que-ofereix-el-crai/drets-d-autor-i-propietat-intellectual-i-acces-obert/acces-obert-UB/publicar-ajuts>

Dades de recerca

# Canvis externs



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[https://commons.wikimedia.org/wiki/File:FAIR\\_data\\_principles.jpg](https://commons.wikimedia.org/wiki/File:FAIR_data_principles.jpg)



**EUROPEAN OPEN SCIENCE CLOUD**



# Canvis externs



# Política institucional a la Universitat

Aprovada pel Consell de Govern el 22 de juliol de 2019

<http://hdl.handle.net/2445/142043>

La gestió de les dades de recerca a la Universitat de Barcelona assegurarà que aquestes siguin trobables, accessibles, interoperables i reutilitzables, segons els principis FAIR.

Les dades s'emmagatzemaran tan aviat com siguin obtingudes en un espai d'accés restringit als investigadors que hi treballen. Les dades s'enviaran a un dipòsit reconegut com a màxim sis mesos després de finalitzar-se la recerca i caldrà fer-les públiques quan es publiquin els resultats de la recerca desenvolupada

Llevat dels casos on calgui restringir l'accés a les dades per qüestions de confidencialitat, seguretat, privacitat o per acords amb terceres parts, les dades que es publiquin es faran de manera oberta

# Deures i responsabilitats

## Per a la institució

Establir un servei específic per a la gestió de dades de recerca, la infraestructura necessària i la formació dels membres de la comunitat universitària.

## Per als investigadors

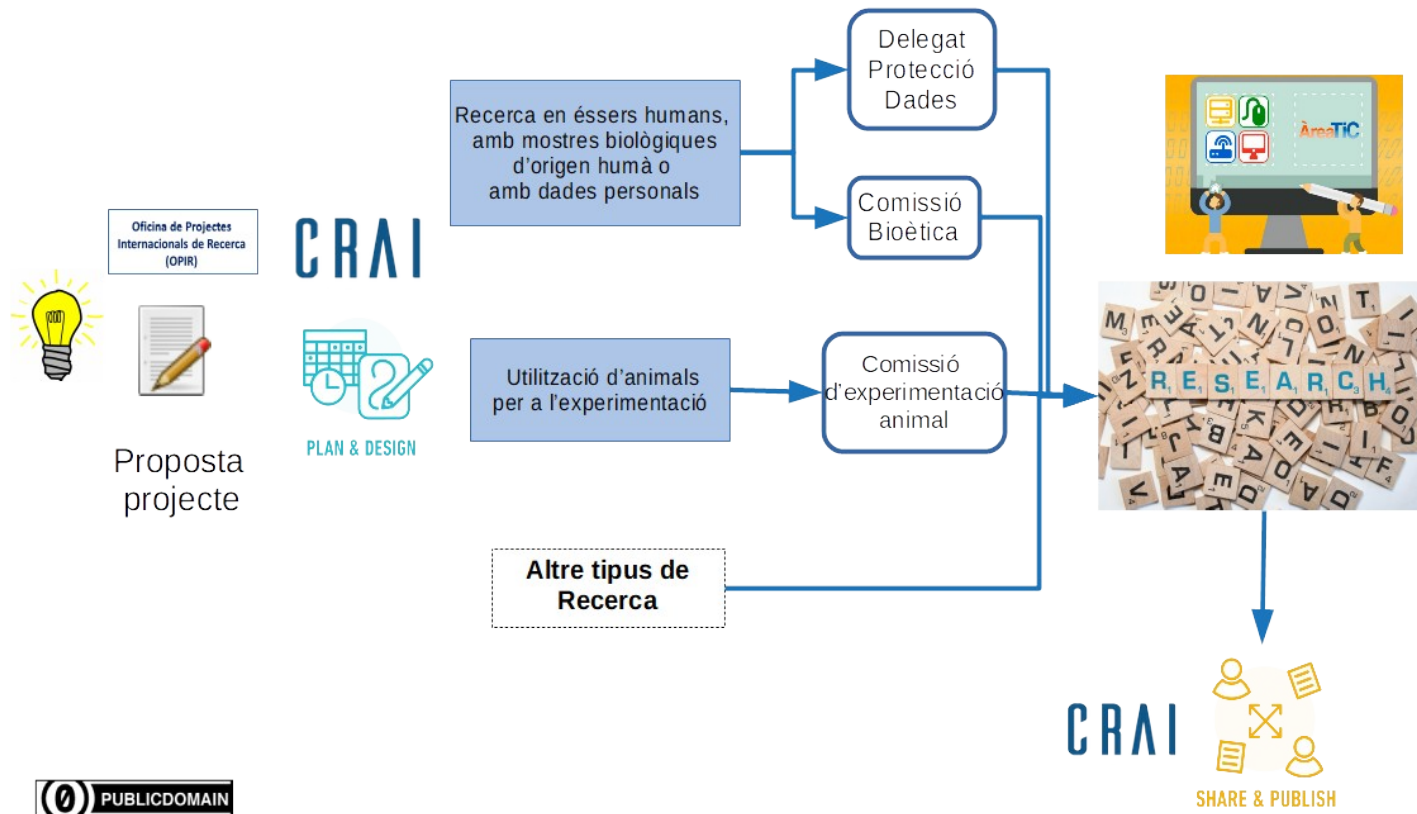
Elaborar plans de gestió de dades

Recollir, documentar, arxivar i publicar les dades seguint els principis establerts en aquesta política

Seguir les normes, la legislació i els principis ètics

# Serveis actuals

Com gestionar les dades des de la idea a la publicació  
Qui us pot ajudar i per on cal passar



# Eines a l'abast de la comunitat

## eiNa DMP

Pla de Gestió de Dades de Recerca

<https://dmp.csuc.cat/>



Dipòsit Digital de la Universitat de Barcelona

# El repositori de dades català

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UNIVERSITIES & CERCA CENTRES



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DATASETS



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Universities (10)

Research Group (6)

1 to 10 of 132 Results

Sort



Data of Hepatitis A virus and Norovirus titers from heat-inactivation experiments in clams  
Nov 12, 2021 - Universitat de Barcelona



Fuentes, Cristina; Pérez-Rodríguez, Francisco Javier; Sabrià Sunyé, Aurora; Beguiristain, Nerea; Pintó Solé, Rosa María; Guix Arnau, Susana; Bosch, Albert, 2021, "Data of Hepatitis A virus and Norovirus titers from heat-inactivation experiments in clams", <https://doi.org/10.34810/data142>, Repostori de Dades de Recerca, V1

The following data measured during the viral inactivation experiments performed on spiked clams are recorded: temperature during inactivation, % recovery of hepatitis A virus, Norovirus GI and Norovirus GII viruses, as well as % recovery of mengovirus used as a process control vi...

<https://dataverse.csuc.cat/>



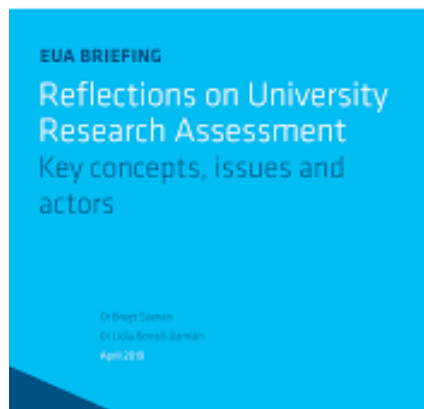
# An elephant in the room



# Gratificacions i Incentius



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- 1 Quantitative evaluation should support qualitative, expert assessment.
- 2 Measure performance against the research missions of the institution, group or researcher.
- 3 Protect excellence in locally relevant research.
- 4 Keep data collection and analytical processes open, transparent and simple.
- 5 Allow those evaluated to verify data and analysis.

## The 10 principles of the Leiden Manifesto for research metrics

(Hicks et al., 2015)







- 6 Account for variation by field in publication and citation practices.
- 7 Base assessment of individual researchers on a qualitative judgement of their portfolio.
- 8 Avoid misplaced concreteness and false precision.
- 9 Recognize the systemic effects of assessment and indicators.
- 10 Scrutinize indicators regularly and update them.



# Gratificacions i Incentius



# Una avaluació del sistema d'avaluació

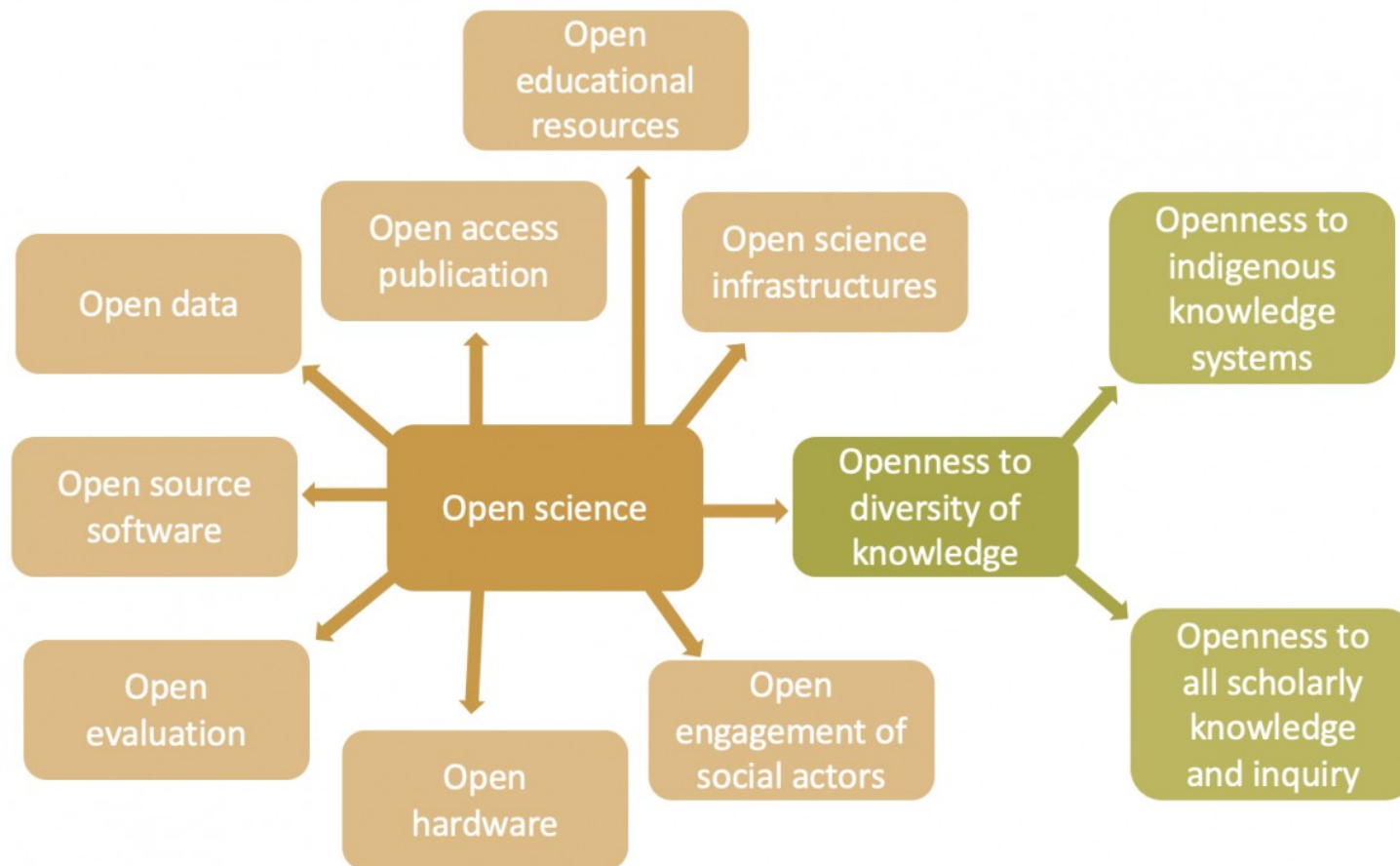
Leiden Manifesto: Ten principles to guide quantitative research evaluation	Assessment
<b>1) Quantitative evaluation should support qualitative, expert assessment</b> The bibliometric analysis is part of the background information for the department's self-evaluation report and the external peer review panel's report.	
<b>2) Measure performance against the research missions of the institution, group or researcher</b> The analysis design from last year's SUND Health Report was kept. Neither SUND nor the bibliometricians have updated the design according to the focus areas of the protocol for the research evaluation.	
<b>3) Protect excellence in locally relevant research</b> The analysis includes non-English publications but does not use metrics built on high-quality non-English publications that would serve to identify excellence in locally relevant research.	
<b>4) Keep data collection and analytical processes open, transparent and simple</b> All datasets and sub-analyses are available to the department. The majority of the indicators are simple. Two indicators (Share of 10% highly cited publications and BFI) are explained to help non-bibliometricians understand the indicators.	
<b>5) Allow those evaluated to verify data and analysis</b> The analysis is verified by the department.	
<b>6) Account for variation by field in publication and citation practices</b> The first part of the analysis is based on CURIS which includes all research publications authored by the department. This part of the analysis shows journal publications, books and contributions to books. The second part of the analysis is based on Scival and includes 89% of the journal publications from CURIS. The indicators Share of 10% highly cited publications and BFI can be used across research fields.	
<b>7) Base assessment of individual researchers on a qualitative judgement of their portfolio</b> Not relevant as the analysis is carried out at department level.	-
<b>8) Avoid misplaced concreteness and false precision</b> The analysis presents multiple indicators to give a pluralistic picture of the department. All indicators are presented as integers, bars, or dots. Still, small variations from one year to the next year should not be interpreted as an increase or decline.	
<b>9) Recognize the systemic effects of assessment and indicators</b> The analysis presents multiple indicators without highlighting any of them, and the analysis design was introduced in 2015 without any links to an incentive structure.	
<b>10) Scrutinize indicators regularly and update them</b> See principle 2.	

# Matrius en lloc de mètriques

<b>Open Science Career Assessment Matrix (OS-CAM)</b>	
<i>Open Science activities</i>	<i>Possible evaluation criteria</i>
<b>RESEARCH OUTPUT</b>	
<b>Research activity</b>	Pushing forward the boundaries of open science as a research topic
<b>Publications</b>	Publishing in open access journals Self-archiving in open access repositories
<b>Datasets and research results</b>	Using the FAIR data principles Adopting quality standards in open data management and open datasets Making use of open data from other researchers
<b>Open source</b>	Using open source software and other open tools Developing new software and tools that are open to other users
<b>Funding</b>	Securing funding for open science activities
<b>RESEARCH PROCESS</b>	
<b>Stakeholder engagement / citizen science</b>	Actively engaging society and research users in the research process Sharing provisional research results with stakeholders through open platforms (e.g. Arxiv, Figshare) Involving stakeholders in peer review processes
<b>Collaboration and Interdisciplinarity</b>	Widening participation in research through open collaborative projects Engaging in team science through diverse cross-disciplinary teams
<b>Research integrity</b>	Being aware of the ethical and legal issues relating to data sharing, confidentiality, attribution and environmental impact of open science activities Fully recognizing the contribution of others in research projects, including collaborators, co-authors, citizens, open data providers
<b>Risk management</b>	Taking account of the risks involved in open science
<b>SERVICE AND LEADERSHIP</b>	
<b>Leadership</b>	Developing a vision and strategy on how to integrate OS practices in the normal practice of doing research Driving policy and practice in open science Being a role model in practicing open science
<b>Academic standing</b>	Developing an international or national profile for open science activities Contributing as editor or advisor for open science journals or bodies
<b>Peer review</b>	Contributing to open peer review processes Examining or assessing open research
<b>Networking</b>	Participating in national and international networks relating to open science

Més enllà del concepte de Ciència Oberta

# La recomanació de la UNESCO



<https://www.oerafrica.org/content/what-open-science-and-how-does-it-relate-open-knowledge>

Image adapted from Robbie Ian Morrisson (<https://commons.wikimedia.org/wiki/File:Osc2021-unesco-open-science-no-gray.png>)

# La recomanació de la UNESCO



# Open Science

<https://en.unesco.org/science-sustainable-future/open-science>

# Gràcies

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@ignasi  
<http://www.ub.edu/odc>