

Open access publishing at DZNE – an introduction

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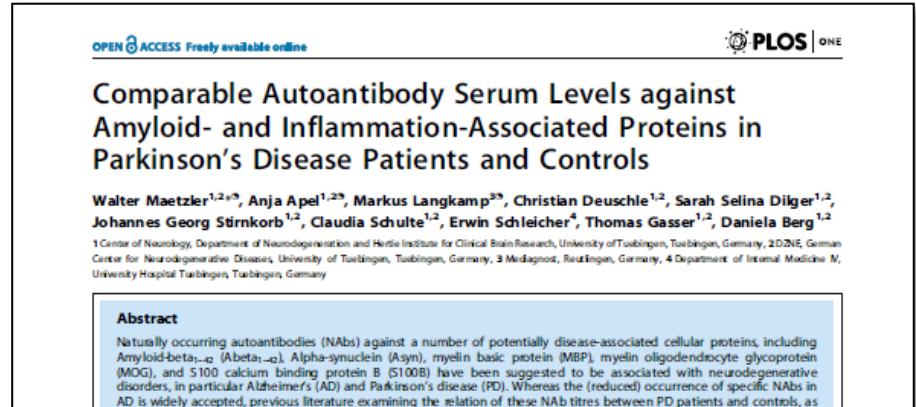
OVERVIEW

- Origins of open access
- „Green road“ vs. „gold road“
- Licences and authors' rights
- Research funding and open access
- Open access in the Helmholtz Association
- OA @ DZNE

OPEN ACCESS PAPER: EXAMPLE



Maetzler, W. et al. 2014:
Comparable autoantibody serum
levels against amyloid- and
inflammation-associated proteins in
Parkinson's disease patients and
controls. PLoS ONE 9: e88604.
doi:[10.1371/journal.pone.0088604](https://doi.org/10.1371/journal.pone.0088604)



OPEN ACCESS: DEFINITIONS

- Open access publications
 - scientific information is made freely available from web repositories (internet servers for digital archiving)
 - it can be read, downloaded, copied, printed, searched, text mined...
 - without financial, legal or technical barriers
- Types of open access information
 - peer-reviewed scholarly publications
 - other publications (Ph.D. theses, reports, conference papers, posters...
 - research data

OPEN ACCESS: ORIGINS

- Rise of the internet
 - unprecedented possibilities for dissemination of information
 - potential for easier and cheaper access
- Traditional subscription-based scientific journals
 - publishing has a cost
 - **but:** considerable price increase („journal crisis“) is ongoing
 - e. g. annual subscription rate for „Biochimica et biophysica acta“: 20.020 €*

*KIT Library 2010/11

OPEN ACCESS: BERLIN DECLARATION

- Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities

- milestone of the open access movement
- signed on 22 October 2003 by the Helmholtz Association and other research organisations

„(...) Our mission of disseminating knowledge is only half complete if the information is not made widely and readily available to society. New possibilities of knowledge dissemination not only through the classical form but also and increasingly through the open access paradigm via the Internet have to be supported. We define open access as a comprehensive source of human knowledge and cultural heritage that has been approved by the scientific community. (...)”

JOURNAL CRISIS: THE COST OF KNOWLEDGE

- in 2012, the British mathematician Timothy Gowers initiated a boycott movement against the publisher Elsevier
- Elsevier is criticised for profits exceeding 35 % as one of the causes for the journal crisis
- boycotters have announced not to publish or review papers in Elsevier journals any more
- to date more than 14,000 scientists have signed the declaration „The cost of knowledge“

OPEN ACCESS: BENEFITS

- wide dissemination of research results
- increased scientific discussion
- raised public perception of science
- better return on investment by public research funding

OPEN ACCESS: „GREEN“ ROAD

- scientists (or their libraries) deposit copies of their peer-reviewed published articles in a document server („repository “)
- see listing of publishers‘ copyright policies: SHERPA/RoMEO
<http://www.sherpa.ac.uk/romeo/>
- 80 % of journals allow „self-archiving“

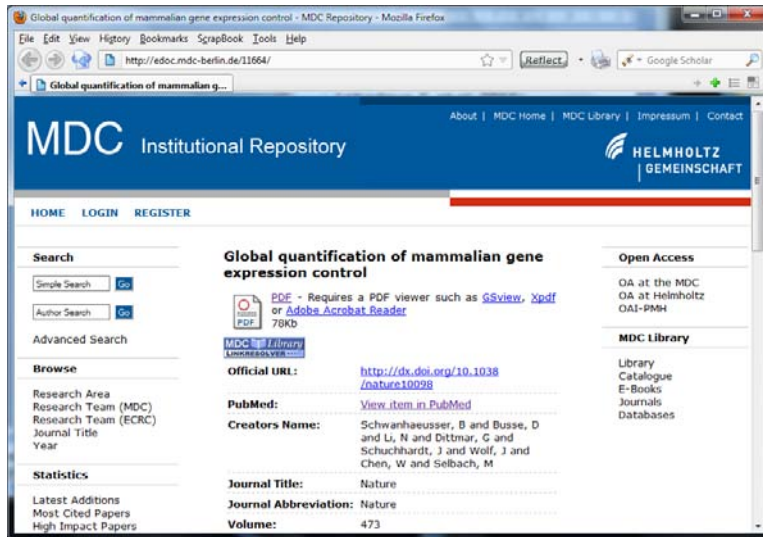
OPEN ACCESS: „GREEN“ ROAD

- final manuscripts, more rarely layouted versions
- institutional or subject-based repositories
- open access immediately or after a grace period (for publishers being able to recoup their investments)



Image: Nicolas Piöch / Ibiblio / CC BY-SA

REPOSITORY CONTENTS: EXAMPLE



Schwanhäusser, B. *et al.* 2011:
Global quantification of
mammalian gene expression
control. *Nature* **473**: 337–342.
doi:[10.1038/nature10098](https://doi.org/10.1038/nature10098)



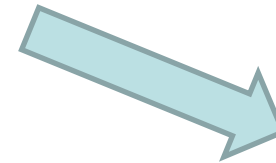
Final draft



Genome-wide parallel quantification of mRNA and protein levels
and turnover in mammalian cells

Björn Schwanhäusser¹, Dorothea Busse¹, Na Li¹, Gunnar Dittmar¹, Johannes
Schuchhardt², Jana Wolf¹, Wei Chen¹, Matthias Seibach¹

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Publisher's
version



REPOSITORIES

- institutional repositories
 - operated by a research institution or university
- subject-based repositories
 - PubMed Central (life sciences)
<http://www.ncbi.nlm.nih.gov/pmc/>
- „general purpose“ repository
 - Zenodo (open repository run by CERN)
<https://zenodo.org/about>

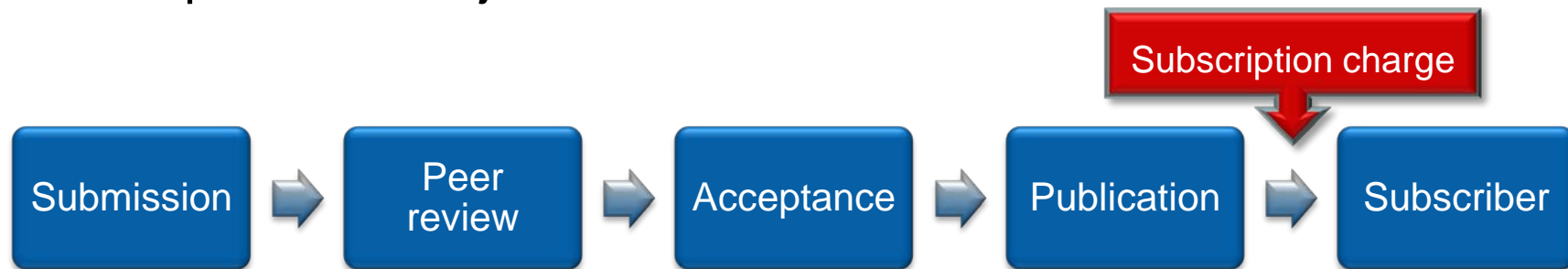


OPEN ACCESS: „GOLD“ ROAD

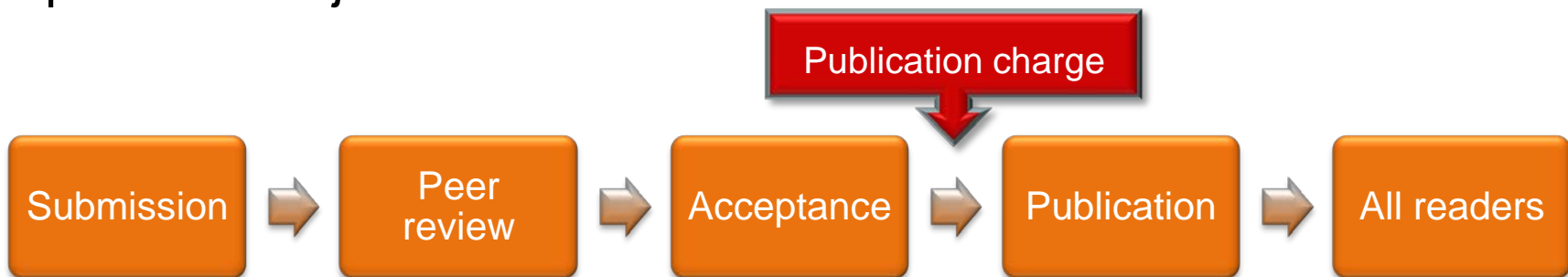
- scientists publish their articles in „open access“ journals
- peer-reviewed articles are made available free of charge immediately on publication
- articles are published under a Creative Commons licence
- the journal usually charges a publication fee
- subscription-based journals may have „hybrid“ models (authors have an option to pay for immediate open access of their published article, **but**: double payment by library subscription?)

SCIENTIFIC JOURNALS: COST MODELS

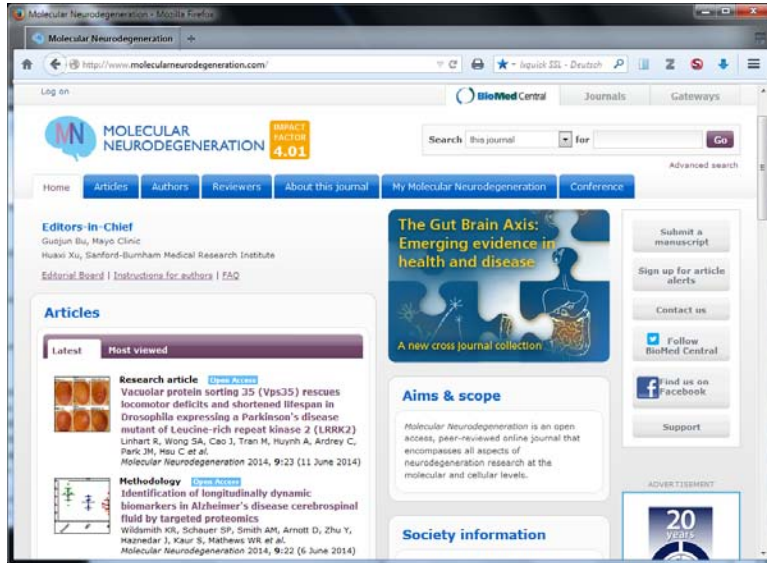
Subscription-based journal



Open access journal



EXAMPLE: MOLECULAR NEURODEGENERATION



- open access journal covering all aspects of neurodegeneration research at the molecular and cellular levels
- financed by publication charges
- established in 2009
- editorial board includes one DZNE researcher
- published by BioMed Central / Springer
- <http://www.molecularneurodegeneration.com/>



ARTICLE PROCESSING CHARGES: EXAMPLES

| Open Access Journal | Publisher | APC | Comment |
|------------------------------------|------------------------------|---------------------|--|
| Journal of Clinical Investigations | Am. Soc. Clin. Investigation | 1275 € (1725 \$) | e.g. 5000 words + 2 figures + 1 table |
| Molecular Neurodegeneration | BioMed Central | 1745 € | |
| Nucleic Acids Research | Oxford Univ. Press | 2130 € | Beispiel: 10 S. + 1 Tab. + 2 Fig. |
| PLoS ONE | PLOS | 998 € (1350 \$) | |

Current as of 16 June 2014

OPEN ACCESS WITH A NEW BUSINESS MODEL: PEERJ

- publication fees charged per author
- membership for life from \$ 99 (for one publication per year)
- authors agree in return to act as a peer reviewer at least once a year

PeerJ

OPEN ACCESS JOURNALS: FINANCING

- fee-based
 - financed by article processing charges
- no-fee
 - subsidised by institutions (universities, research centres, learned societies...)
 - revenues from advertising, membership dues, print edition...
 - journal run by volunteers

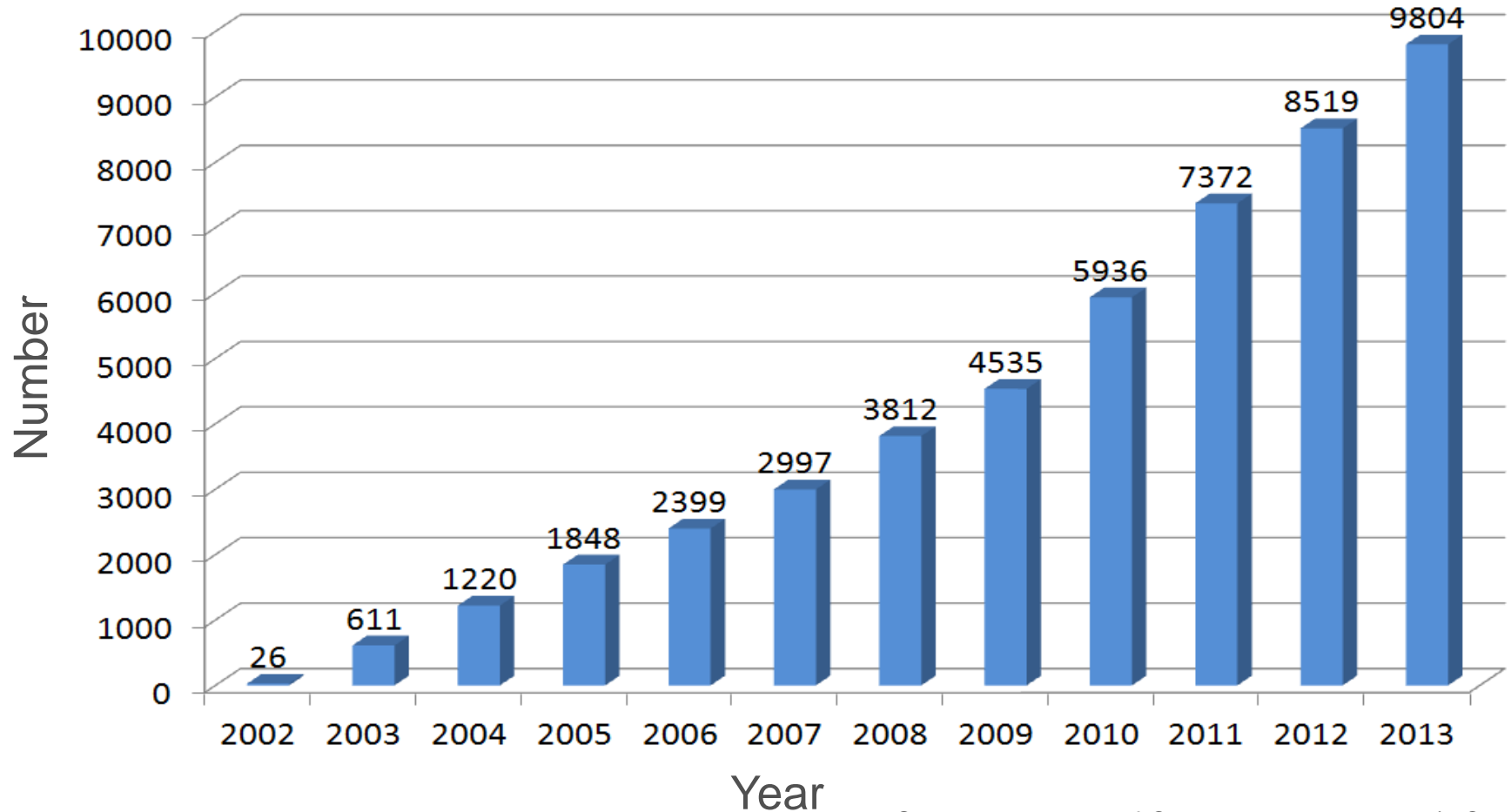
SURVEY: PAYMENT OF PUBLICATION FEES

How was this publication fee covered (multiple answers possible)?
[n=9'645]

| | |
|---|------|
| My research funding includes money for paying such fees | 28 % |
| I used part of my research funding not specifically intended for paying such fees | 31 % |
| My institution paid the fees | 24 % |
| I paid the costs myself | 12 % |
| Other | 5 % |

Dallmeier-Tiessen, S. et al 2011: Highlights from the SOAP project survey.
What scientist think about open access publishing. <http://arxiv.org/abs/1101.5260>

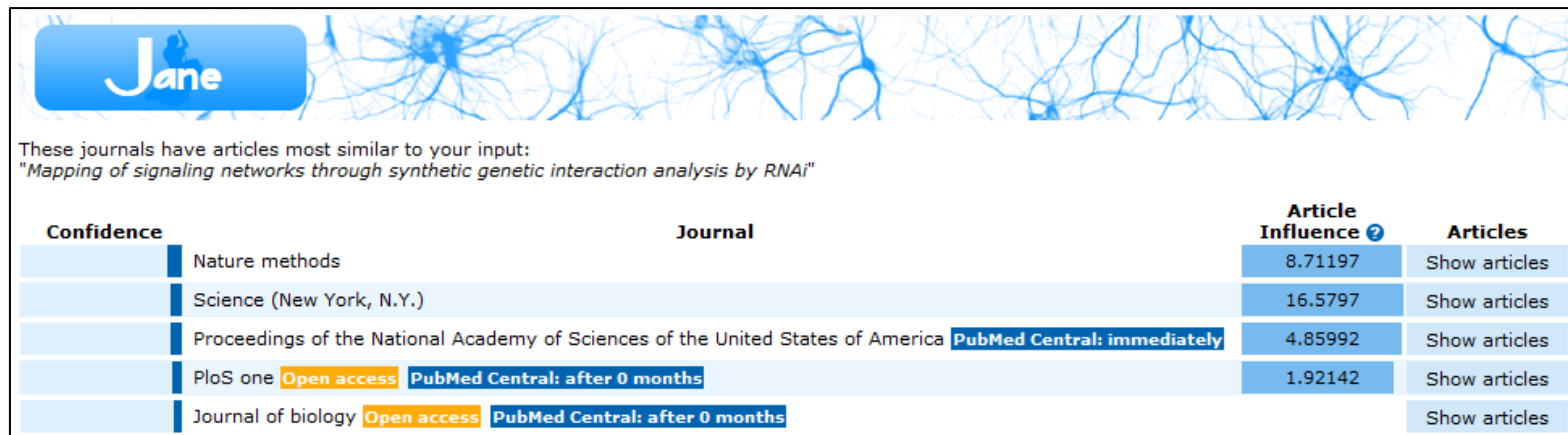
OPEN ACCESS JOURNALS: GROWTH IN NUMBERS



Source: Directory of Open Access Journals (DOAJ)

COOL TOOL: JANE

- bibliographic web tool for bioscientists
<http://biosemantics.org/jane/>
- enter title / abstract of your manuscripts
- JANE uses a semantic search in Medline (database of PubMed) to return list of best matching journals, including their open access status



The screenshot shows the JANE web tool interface. At the top left is the 'Jane' logo. Below it, a search result is displayed: 'These journals have articles most similar to your input: "Mapping of signaling networks through synthetic genetic interaction analysis by RNAi"'. A table lists five journals with columns for Confidence, Journal, Article Influence, and Articles. The 'Articles' column contains 'Show articles' links. The 'Journal' column includes open access status indicators: 'Open access' (orange) and 'PubMed Central: immediately' (blue) for the third journal, and 'Open access' (orange) and 'PubMed Central: after 0 months' (blue) for the last two journals.

| Confidence | Journal | Article Influence | Articles |
|------------|--|-------------------|---------------|
| | Nature methods | 8.71197 | Show articles |
| | Science (New York, N.Y.) | 16.5797 | Show articles |
| | Proceedings of the National Academy of Sciences of the United States of America PubMed Central: immediately | 4.85992 | Show articles |
| | PloS one Open access PubMed Central: after 0 months | 1.92142 | Show articles |
| | Journal of biology Open access PubMed Central: after 0 months | | Show articles |

OPEN ACCESS: (RE-) SEARCH ENGINES

- BASE

- <http://www.base-search.net/>

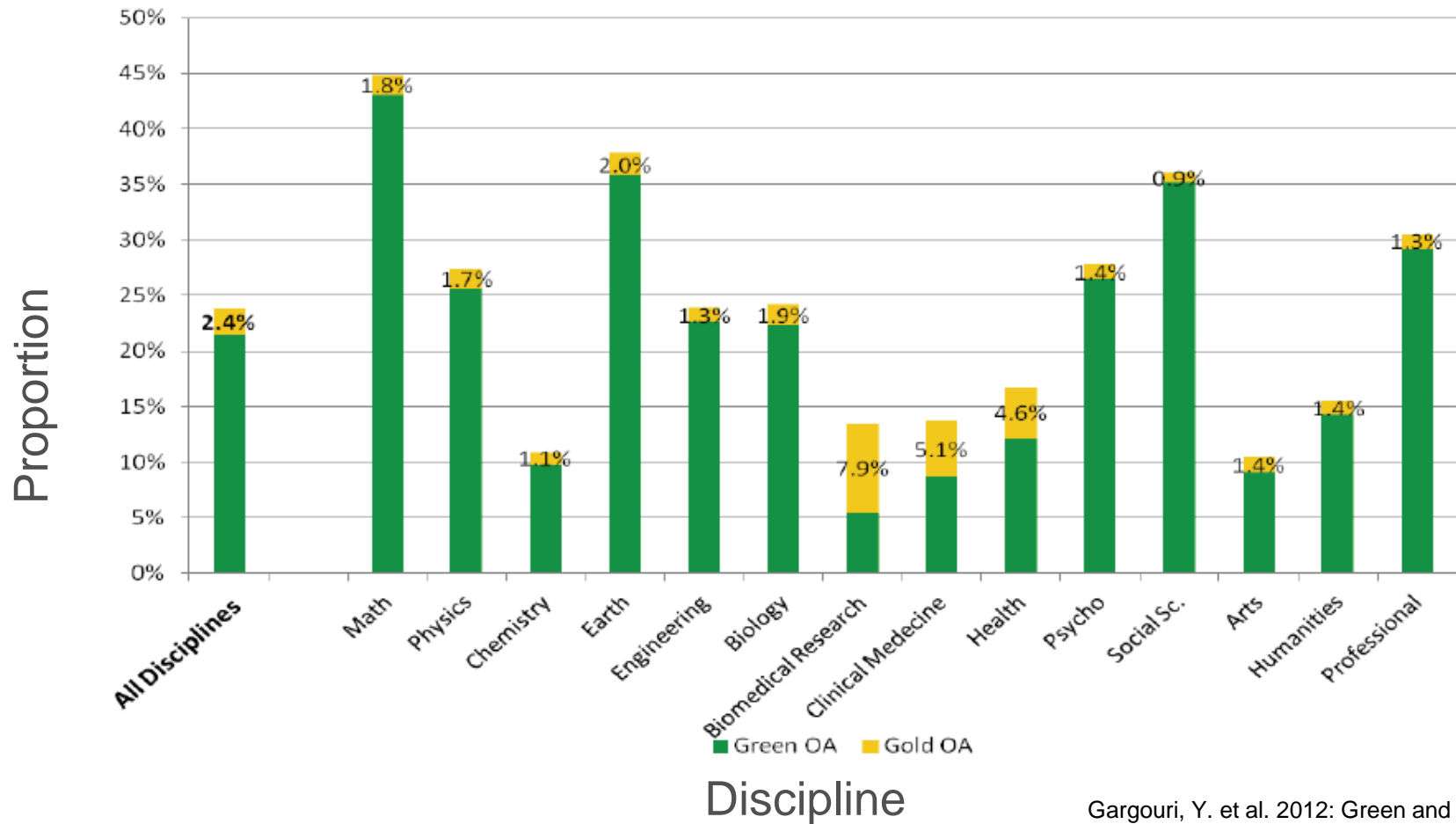


- Google Scholar

- <http://scholar.google.com/>



SCIENTIFIC PUBLICATIONS: OA GREEN / GOLD



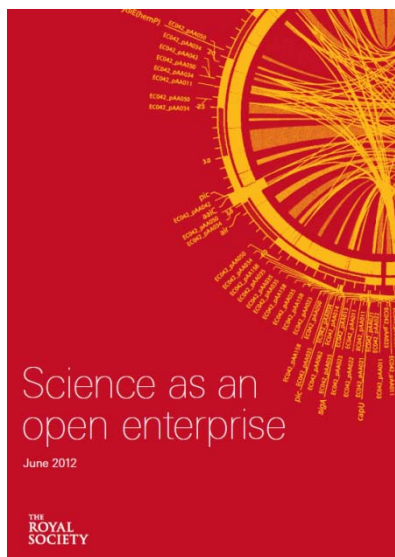
Gargouri, Y. et al. 2012: Green and gold open access percentages and growth, by discipline.

ACCESS TO RESEARCH DATA

- data management
 - types of research data
 - work flows
 - costs
- data archiving
 - in the lab
 - in the institution
 - in the project
- data sharing
 - with colleagues
 - with the public
- data repositories
 - DRYAD
 - PANGAEA
- DOIs for data
 - DataCite

RESEARCH DATA: „INTELLIGENT OPENNESS“

„Realising the benefits of open data requires effective communication through a more intelligent openness: data must be accessible and readily located; they must be intelligible to those who wish to scrutinise them; data must be assessable so that judgments can be made about their reliability and the competence of those who created them; and they must be usable by others.“



Boulton, G. et al. 2012:
Science as an open enterprise.
London: Royal Society.

<http://royalsociety.org/policy/projects/science-public-enterprise/report/>

LICENCING: CREATIVE COMMONS

- Licence
 - contract between author and user

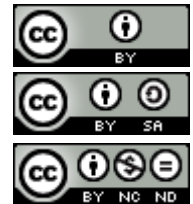
- Creative Commons



- non-profit organisation releasing copyright licenses for public use

- Examples

- CC BY Attribution
- CC BY-SA Attribution-ShareAlike
- CC BY-NC-ND Attribution-NonCommercial-NonDerivs



LICENCES: OPEN ACCESS JOURNALS

- licence should allow maximum dissemination and use
 - recommended: CC BY
- more restrictive licences (like CC BY-NC) could prevent use, e.g. in
 - text mining
 - open course materials
 - text collections (incompatible with less restrictive licences)
 - Möller, E. 2007: The case for free use: reasons not to use a Creative Commons - NC license.
<http://freedomdefined.org/Licenses/NC>

FRAMING MORE FAVOURABLE AUTHOR'S AGREEMENTS: QUICK AND DIRTY

- Example:

„Assignment of copyright

The Author(s) assign to *XYZ Press* ~~exclusive~~ copyright and related rights in the Article, including the right to publish the Work in all forms and media including print and all other forms of electronic publication or any other type of publication including subsidiary rights in all languages. (...)

Author signature _____ Date _____”

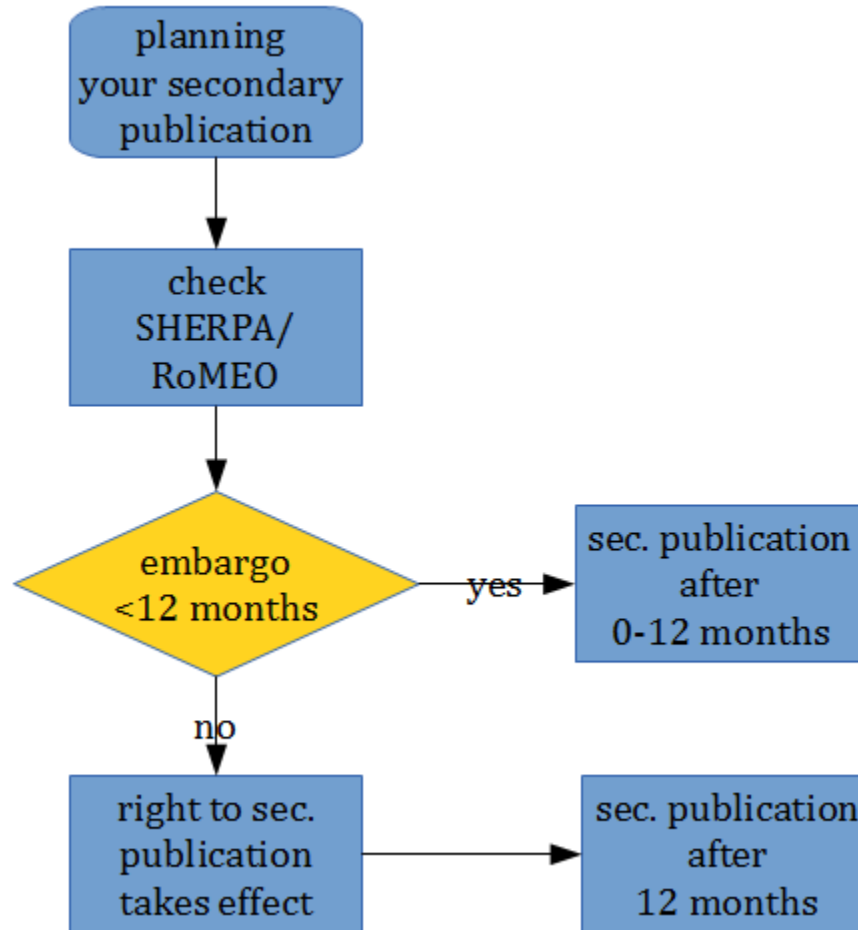
FRAMING MORE FAVOURABLE AUTHOR'S AGREEMENTS: MODEL AMENDMENTS

- Model amendment to publishing agreement
<http://ec.europa.eu/research/science-society/index.cfm?fuseaction=public.topic&id=1403>
- Licence to publish
<http://copyrighttoolbox.surf.nl/copyrighttoolbox/authors/licence/>

RIGHT TO SECONDARY PUBLICATION („ZWEITVERÖFFENTLICHUNGSRECHT“)

- change in German copyright law ([BGBl. I, Nr. 59, 08.10.2013](#))
 - new § 38 (4) Urheberrechtsgesetz:
„Der Urheber eines wissenschaftlichen Beitrags, der im Rahmen einer mindestens zur Hälfte mit öffentlichen Mitteln geförderten Forschungstätigkeit entstanden und in einer periodisch mindestens zweimal jährlich erscheinenden Sammlung erschienen ist, hat auch dann, wenn er dem Verleger oder Herausgeber ein ausschließliches Nutzungsrecht eingeräumt hat, das Recht, den Beitrag nach Ablauf von zwölf Monaten seit der Erstveröffentlichung in der akzeptierten Manuskriptversion öffentlich zugänglich zu machen, soweit dies keinem gewerblichen Zweck dient. Die Quelle der Erstveröffentlichung ist anzugeben. Eine zum Nachteil des Urhebers abweichende Vereinbarung ist unwirksam.“

FLOW CHART: PLANNING YOUR SECONDARY PUBLICATION



WEB 2.0 AND SCIENTIFIC PUBLISHING

- Zotero

- free open source reference management system with some social network feature

The logo for Zotero, featuring the word "zotero" in a lowercase, sans-serif font. The letter "z" is red, and the remaining letters "otero" are black.

- ResearchGate

- commercial social network for scientists with reference sharing features

The logo for ResearchGate, consisting of the text "ResearchGate" in a bold, sans-serif font. "Research" is black and "Gate" is green. Below it, the words "SCIENTIFIC NETWORK" are written in a smaller, black, all-caps font.

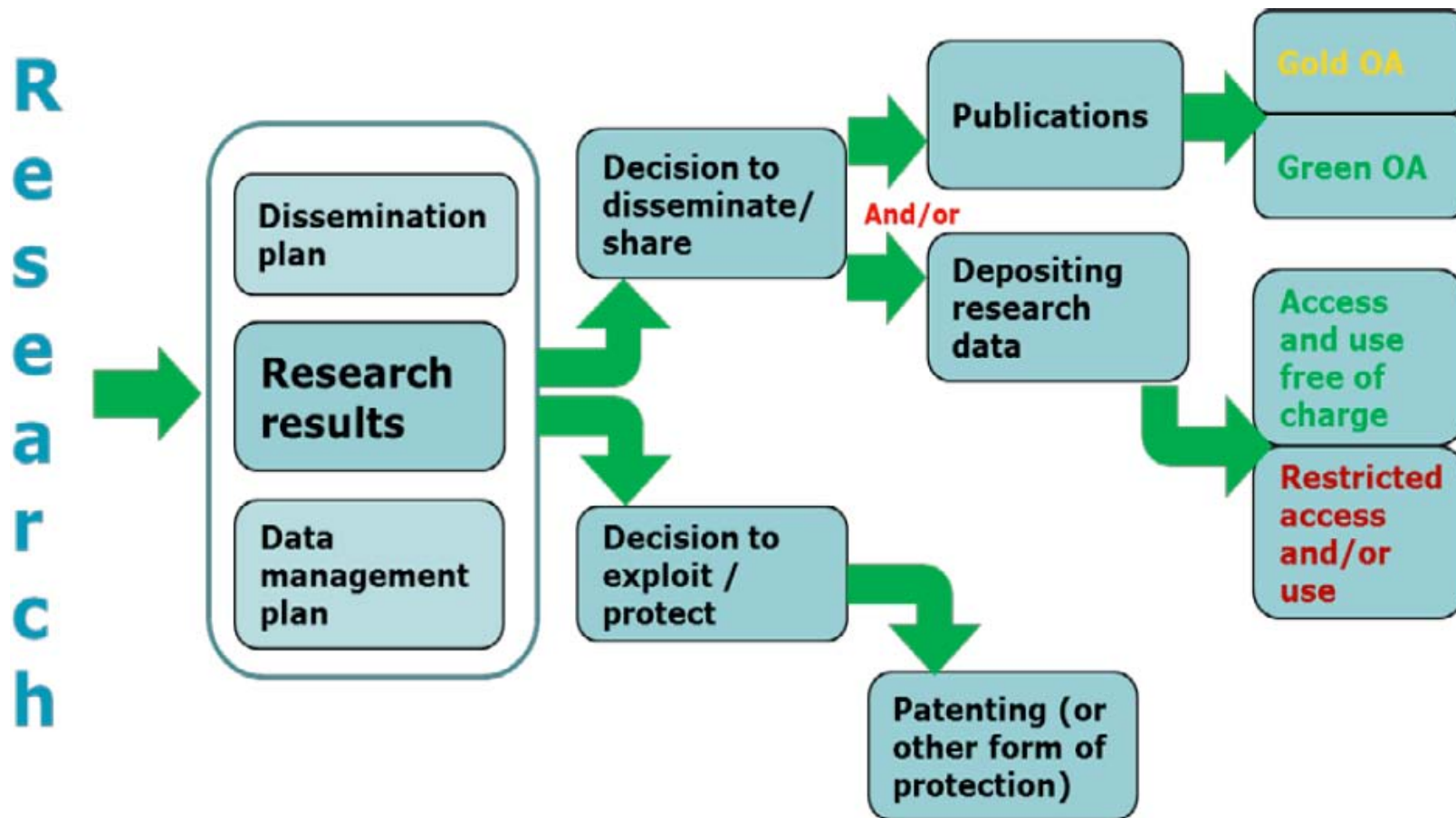
OPEN ACCESS POLICIES

- public funding bodies
 - want to derive maximum return from their investment of tax payers' money
 - funding on condition of open access publishing of results (Wellcome Trust, NIH, EU)
- universities and research organisations
 - faculty members grant copyright to university and provide copies of their articles (Harvard University, MIT)
 - recommendations for setting up institutional repositories and establishing institutional open access requirements

OPEN ACCESS IN EU FRAMEWORK PROGRAMME HORIZON 2020

- compulsory open access publication of papers from EU-funded projects („green“ or „gold“ road)
- article processing charges will be reimbursed
- new: „Open Research Data Pilot“ for selected topics (e.g. Future and Emerging Technologies)
- EU Commission information leaflets:
 - [Fact sheet: open access in Horizon 2020](#)
 - [Guidelines on open access to scientific publications and research data in Horizon 2020](#)
 - [Guidelines on data management in Horizon 2020](#)

OPEN ACCESS IN EU FRAMEWORK PROGRAMME HORIZON 2020



Guidelines on open access to scientific publications and research data in Horizon 2020. EU Commission, DG Research and Innovation, December 2013.

OPEN ACCESS IN THE HELMHOLTZ ASSOCIATION

- Agreement of the Assembly of Members, 27 September 2004

„Publications from the Helmholtz Association shall in future, without exception, be available free of charge, in so far no conflicting Agreement with the publishers or others exists.“

Appointment



- Working Group („Arbeitskreis“) Open Science

Application for



- Helmholtz Open Science Coordination Office

Support for Helmholtz scientists and their centres with the implementation of open access; external representation

HELMHOLTZ OPEN ACCESS ACTIVITIES

- Scientists
 - many Helmholtz scientists are active as editors or reviewers for open access journals
- Helmholtz centres
 - open access recommendations as part of publishing guidelines
 - the majority of centres is operating repositories for publications and research data
- Helmholtz Open Access Policy
 - [OA for publications from INF-funded projects](#)

OA @ DZNE: PUBLICATION FUNDS

- DZNE library supports open access publications by financing **three Open Access funds** from the following publishers
 - [BioMedCentral](#)
 - [Wiley Open Access](#)
 - [FacultyOf1000 – Research](#)
- with aim to
 - support OA by financing publishing in Open Access „only“ e-journals
 - reduction of publication and subscription costs (in the longer term for DZNE as a whole)
 - facilitate the publication process (esp. payment process)

OA @ DZNE: PUBLICATION FUNDS

- Preconditions for funding by DZNE library:
 - while applying for the funding of your publication, choose DZNE as your member institution
 - submitting and/or corresponding author should be affiliated to DZNE (use DZNE e-mail address!)
 - DZNE should be (one of) the main affiliation(s)
 - correct citation of DZNE sites, see publication rules on the intranet under “Getting Started at DZNE”: [DZNE Internal Rule 431 \(Rules for Publication\)](#)

INFORMATION FOR SCIENTISTS

- DZNE publications and publication process
<https://intranet.dzne.de/intranet/home/facilities-departments/core-facilities-1/library/publications-dzne-2>
- Series of webinars on research data
<http://oa.helmholtz.de/bewusstseinschaerfen/workshops/webinare-zu-forschungsdaten.html>
- Helmholtz Open Science Newsletter (in German)
<http://oa.helmholtz.de/bewusstseinschaerfen/newsletter.html>
- Webinar for Helmholtz Ph.D. students
October 2014 during International Open Access Week

HELMHOLTZ OPEN SCIENCE

Thank you for listening!

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<http://www.dzne.de/en/research/core-facilities/library-and-information-services.html>

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<http://oa.helmholtz.de/>

