

Elsevier Research Intelligence

Changes in Scientific Communication *a culture of openness*

Stephane Berghmans, VP Academic & Research Relations EU

Open Access Days 2015, Zurich

DG Research & Innovation: 3 priorities

Carlos Moedas, Commissioner, DG Research & Innovation

ERA Conference, A new start for Europe: Opening up to an ERA of Innovation (22 June)



Open Innovation

How do you get more research to the market?

Open Science

How can Europe bank on the world's largest science output?

Open to the world

AKA Science Diplomacy

Developing a European Open Science Agenda: The RoadMap

Robert Jan Smits, Director General, DG Research & Innovation

ERA Conference, A new start for Europe: Opening up to an ERA of Innovation (22 June)

Autumn 2015

Stakeholder Discussion

on the European Open Science Agenda

Autumn 2015 - Spring 2016

Concretization of OS actions

under the *DSM strategy*

4-5 April 2016

Conference on Open Science

during the Dutch Presidency

May 2016

Competitiveness Council presentation

of the European OS Agenda

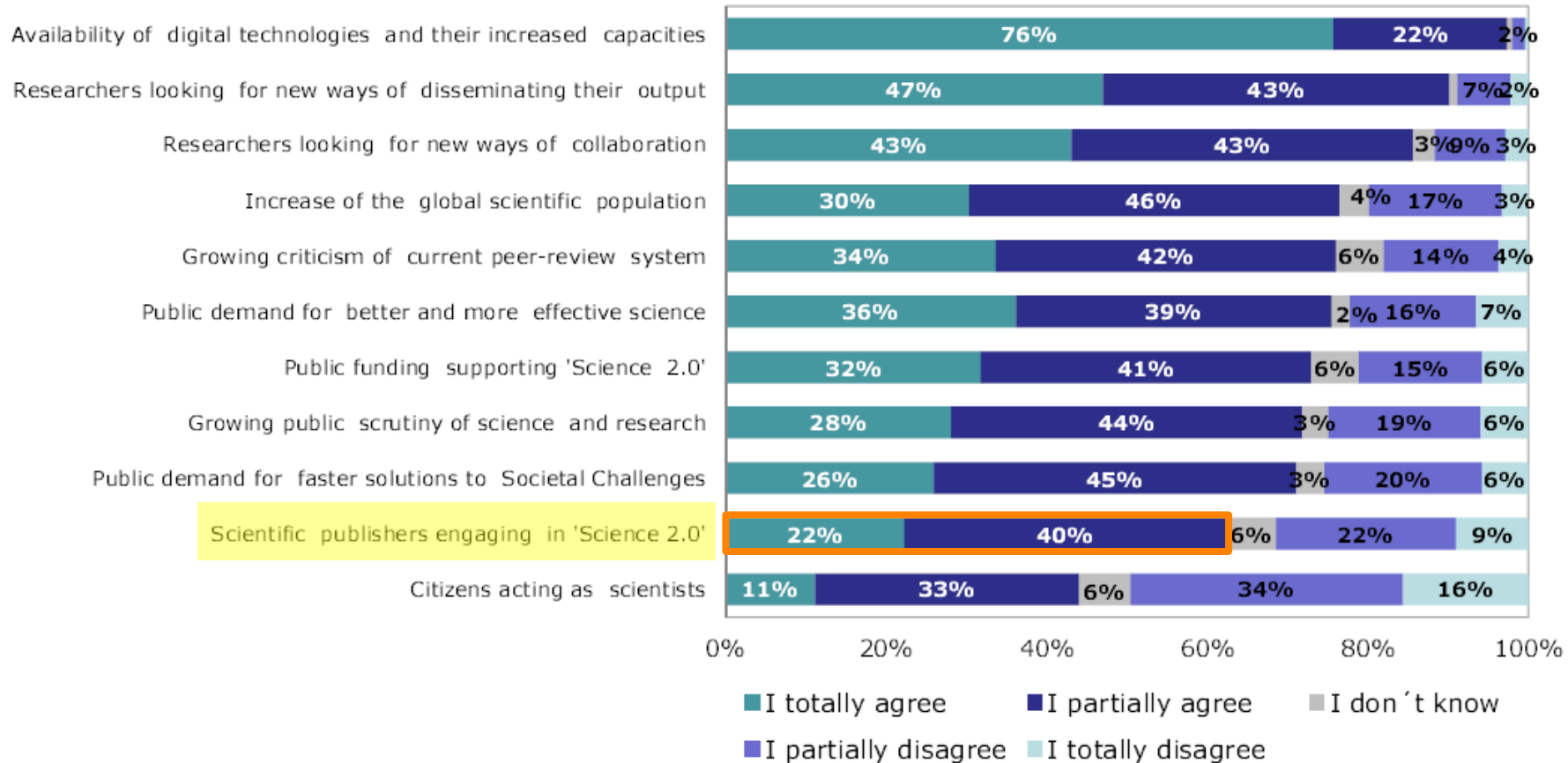




ELSEVIER

European Commission public consultation on Science 2.0

What are the key drivers of 'Science 2.0'?

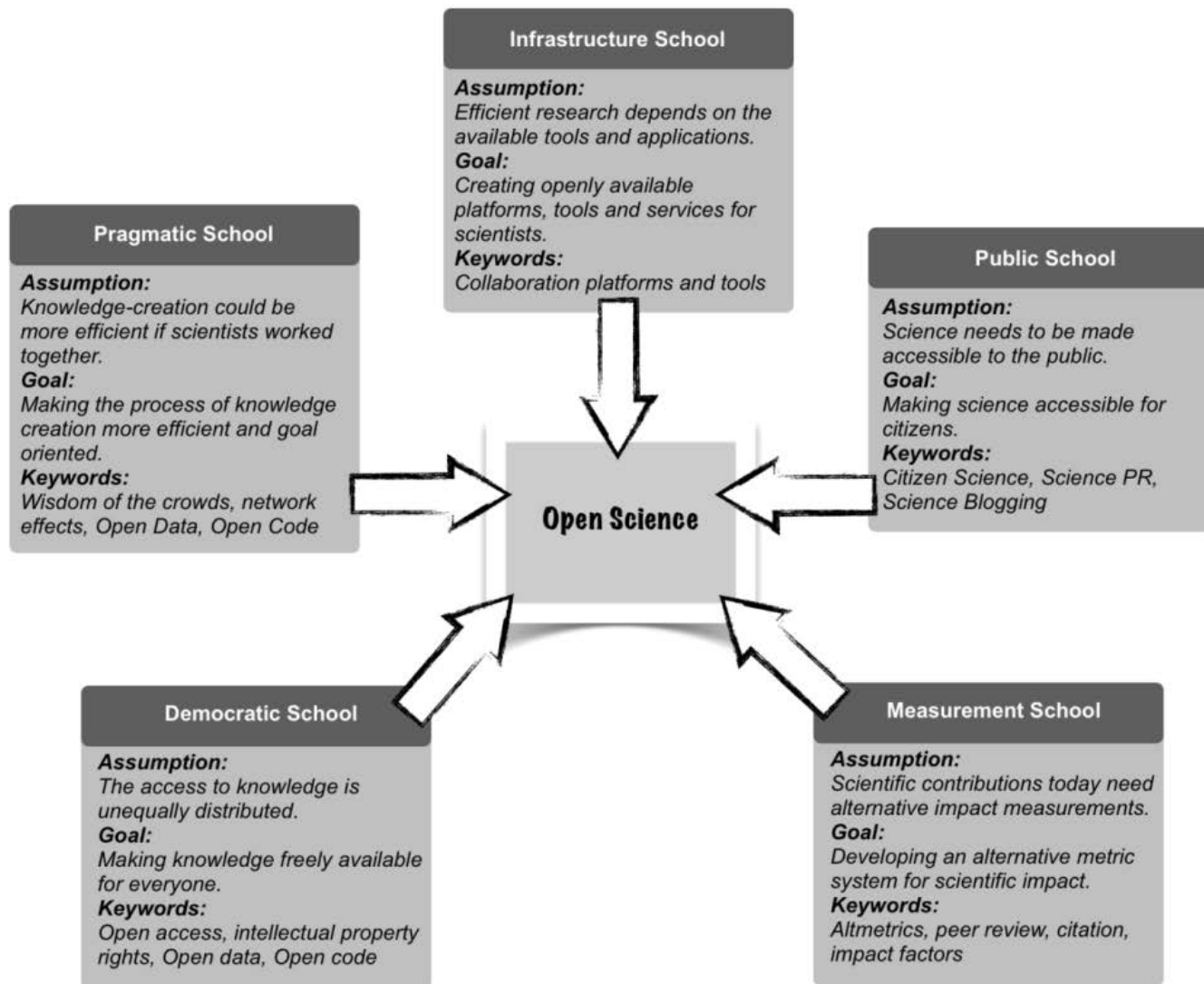


Sample size: 498
Missing: 8 to 12

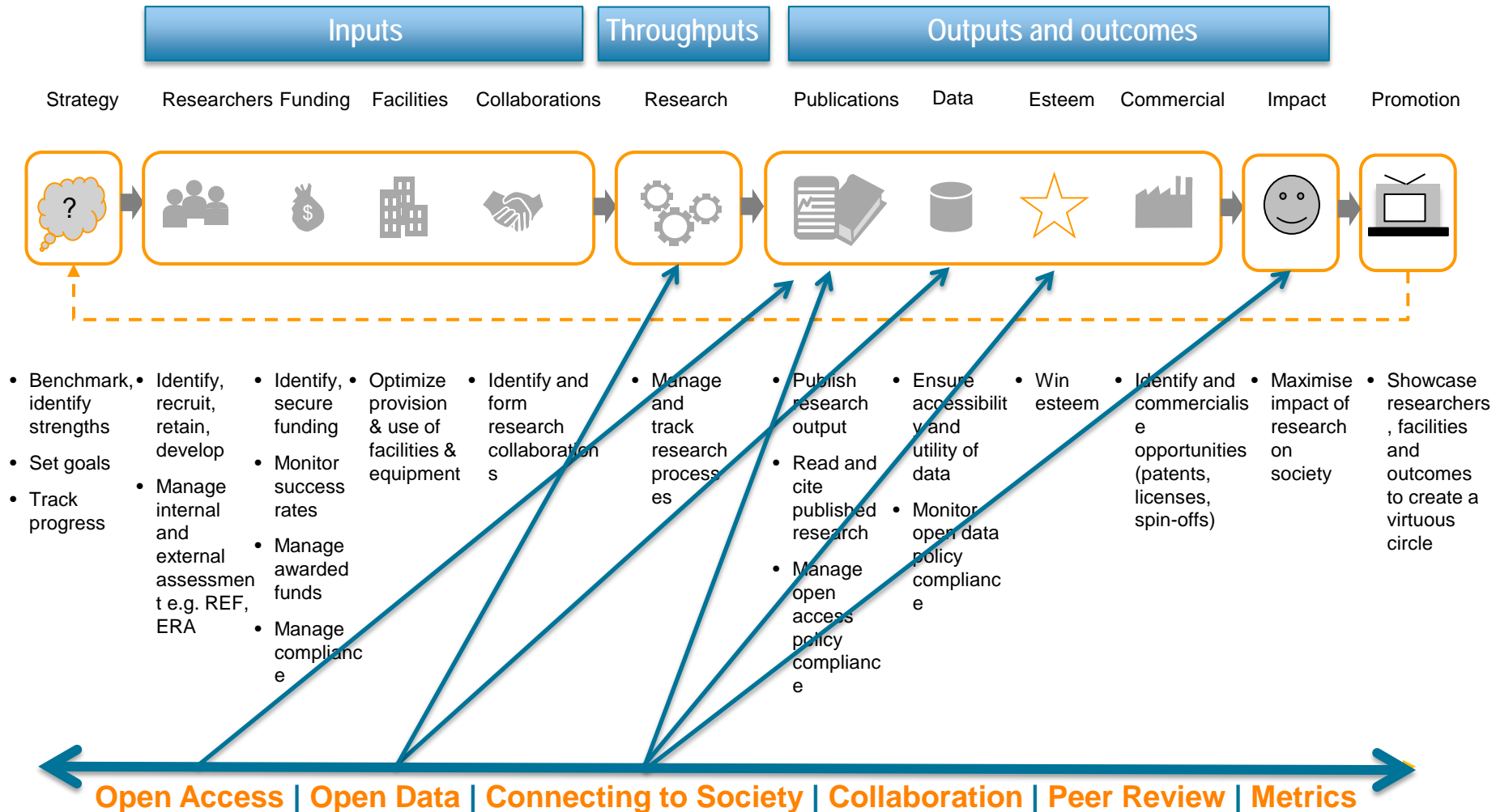


<http://ec.europa.eu/digital-agenda/en/news/final-report-science-20-public-consultation>

What is Open Science ...?



We support the world of research



Open Access

Elsevier and open access

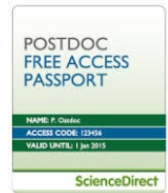
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Dmitry Savostyanov @drraug

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9 december



- **Actively engage**
 - Support both gold and green OA
- **Test and learn**
 - Developing systems and technology to implement OA
 - Working with funders, institutions and authors
- **Offer choice**
 - Respect the academic freedom of authors
 - Offer various ways for authors to comply with funder and institutional policies
 - Maintain focus on quality



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Offer green OA options

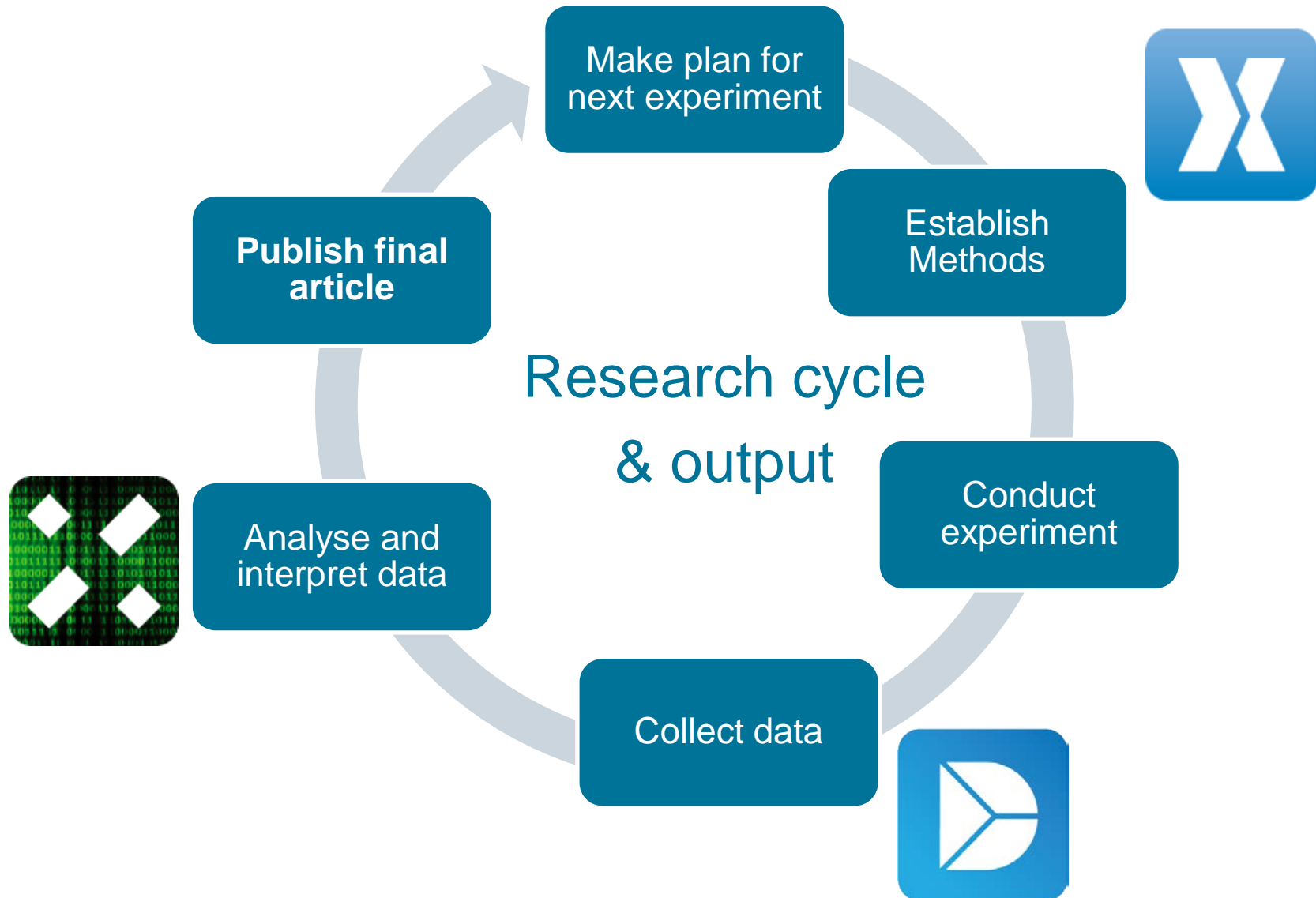
Gold open access

- Launching new open access journals and all established journal offer an OA option
- Choice of either a commercial (CC BY) or non-commercial (CC-BY-NC-ND) user license.
- Article publishing charges (APCs) range from \$500- \$5000 (US Dollars)

Green open access

- All journals offer authors an option to self archive
- Share link service provides 50 days free access to recently published research
- Pilot partner in the CHORUS initiative
- Open archives in 97 journals, including all Cell Press titles after 12 months.

Innovative publishing in open access



Innovative publishing in open access

Reproducibility



MethodsX is a broad (all experimental disciplines) Open Access journal, publishing method details in the microarticle format.

84% spend most of their research time on validating, tweaking and improving existing methods.

77% indicate that it's important to get credit for the work done in the lab to improve methods.

Data in Brief

article type describes open datasets so it can easily found, reproduced, reused and reanalyzed.

Data driven



Genomics Data brings interpretation to complicated datasets. The journal provides a way for genomics researchers to bring their data – along with the details necessary to understand and reuse the data – to the wider community.



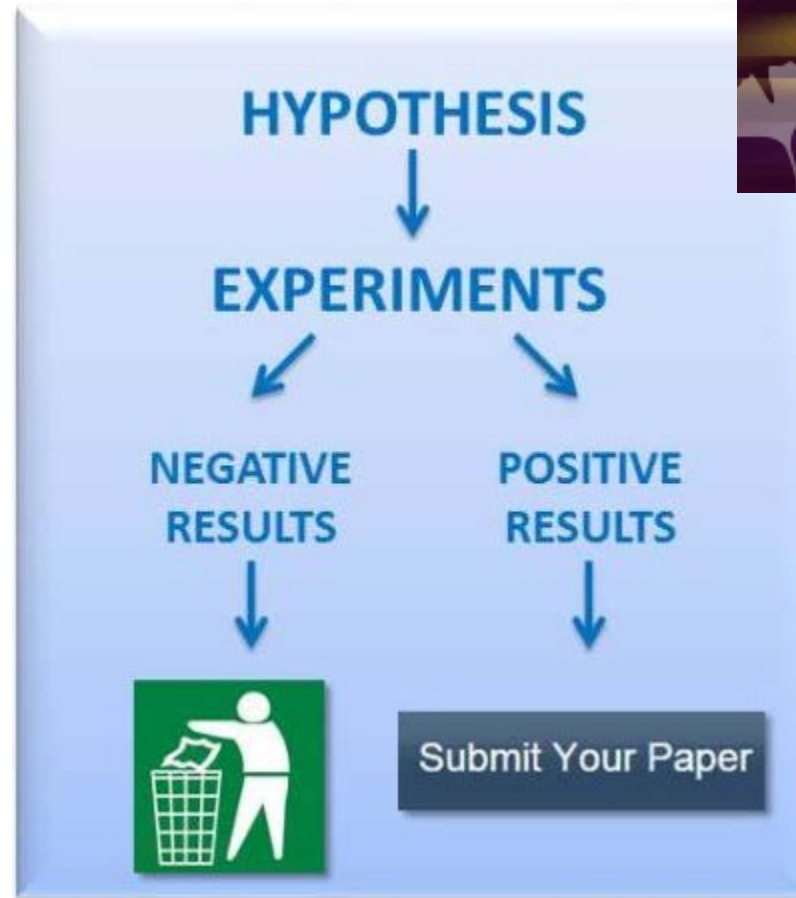
Analyse & interpret

SoftwareX aims to acknowledge the impact of software on today's research practice, and on new scientific discoveries in almost all research domains.

SoftwareX

stresses the importance of the software developers who are, in part, responsible for the impact of software

Innovative publishing in open access





The journal has innovation at its core:

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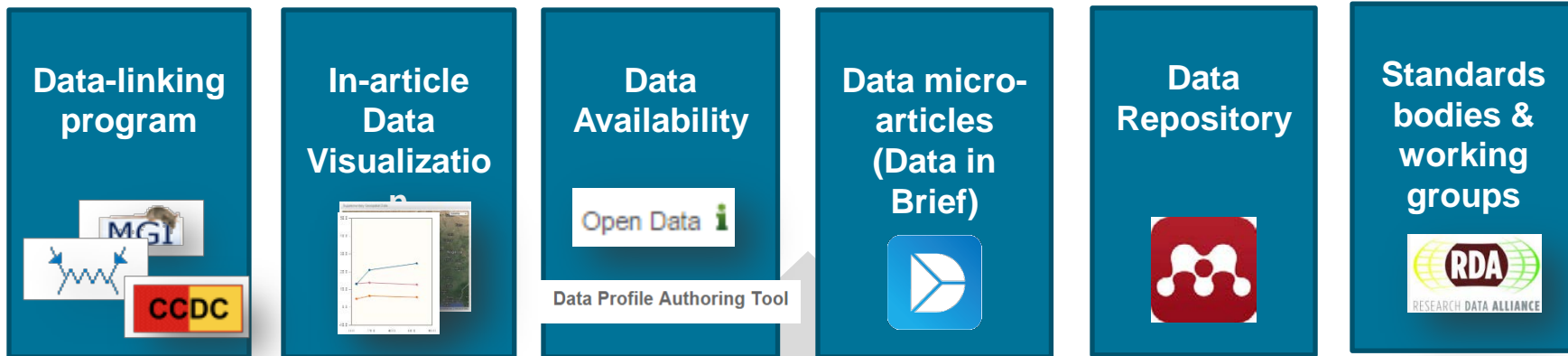
\$1250

(US Dollars)

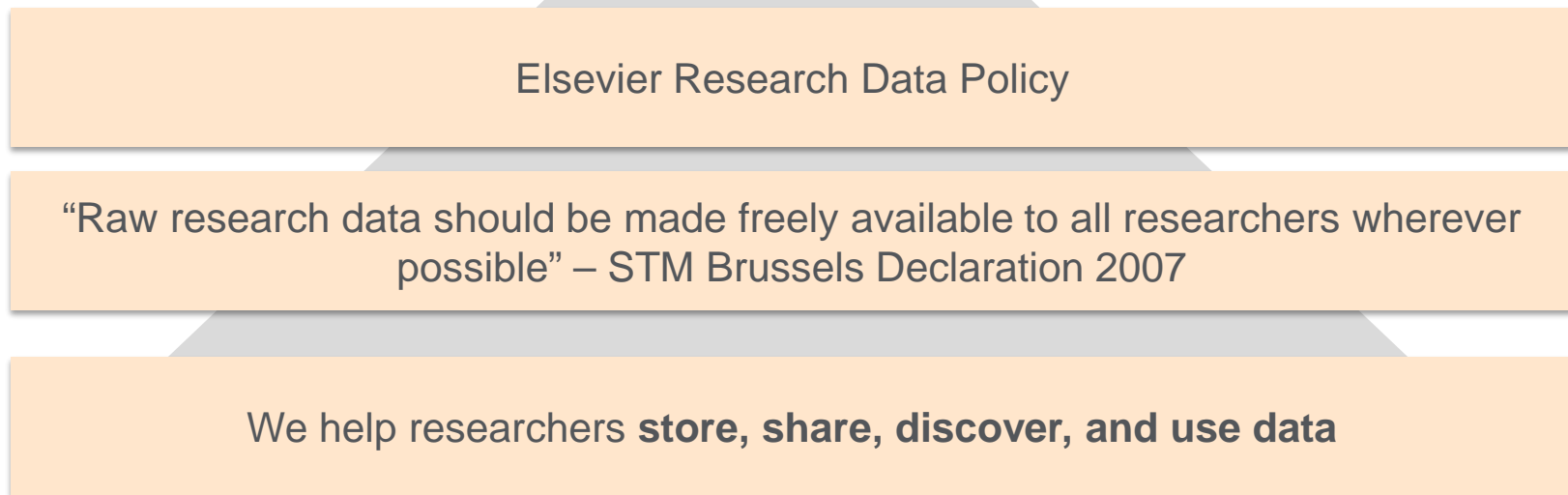
Open Data

Supporting open data

PROGRAMS & PILOTS

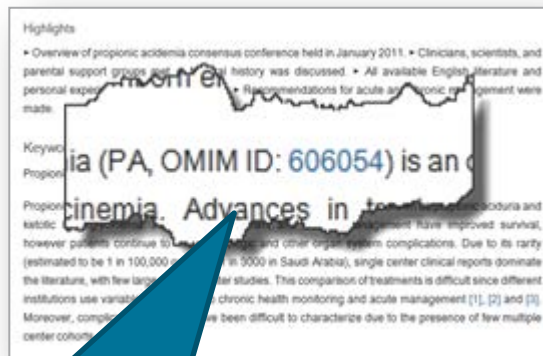


MISSION & POLICY

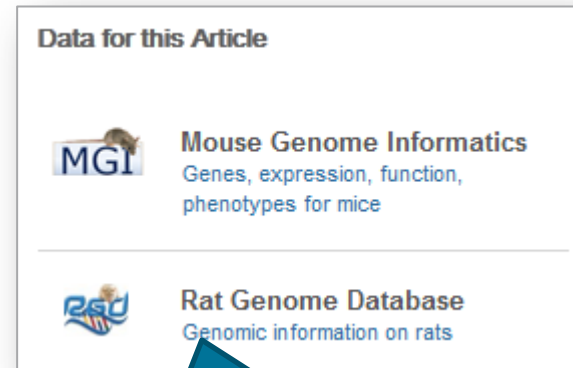


Data-linking program

- Elsevier has an extensive program with 40+ leading domain-specific data repositories to interlink articles and data
- Makes it easier to find relevant data and place data into the right context
- Linking through in-article accession numbers, data DOI's, or data banners



Linking through in-article data accession numbers



Database banners shown next to the article on ScienceDirect

See <http://www.elsevier.com/databaselinking>

Open Data Pilot

In this case, reader has guest access only

You have **Guest** access to ScienceDirect Find out more...

The screenshot shows the ScienceDirect interface for the article "Habitat disturbance effects on the physiological stress response in resident Kenyan white-bearded wildebeest (*Connochaetes taurinus*)". The article is from Volume 182, February 2015, Pages 177–186. The authors are J.A. Stabach^a, R.B. Boone^a, J.S. Worden^b, and G. Florant^c. The page offers options to purchase the article for \$35.95 or rent it at DeepDyve. A callout box points to the "Check access" button, stating "In this case, reader has guest access only". Another callout box points to the "Supplementary data 4" section, stating "This supplementary data set is publicly available as Open Data (CC BY) on ScienceDirect". The "Open Data within this article" section indicates that the article contains open data for download under the CC BY license, with a link to the Creative Commons license and a download file (19 KB).

See article: <http://www.sciencedirect.com/science/article/pii/S0926860X14003688>

Sneak preview: Research Data Search



wistar rat



Data-set sources

view results as a list



Data from: Environmental levels of oestrogenic and antiandrogenic compounds feminize digit ratios in male rats

Auger, Jacques, Le Denmat, Dominique, Berges, Raymond, Doridot, Ludivine, Salmon, Benjamin, Canivenc-Lavier, Marie Chantal & Eustache, Florence

Digit length ratios, especially the second-to-fourth digit ratio (2D : 4D), are associated with various pathological and behavioural conditions in many species including humans and are dependent upon prenatal androgen to oestrogen balance. It is unknown whether digit ratios are modified by environmental exposure to ubiquitous endocrine disruptors. We studied the effect on adult male Wistar rat digit ratios of a



Effects of Ethanol Extract of Garcinia Kola on Biochemical Markers of Liver Function of Wister Rats

Invention Journals & Denen Atsukwei1, Samuel Odu Odeh2, Joseph E. Toryila3, Egesie U.G. 2 Ejike Daniel Eze1

ABSTRACT : The study investigated the effects of ethanolic extract of Garcinia kola seed on the activities of some liver biomarker enzymes. To achieve this aim, thirty (30) wistar rats weighing 150.42 ± 3.98 were divided into three groups (I, II and III) comprising ten animals each. Animals in group I (control) received 0.5 ml of distilled water while those in groups II and III were administered 100 and 200

ScienceDirect

Nigral [3H]muscimol binding in naive Wistar AS and their non-epileptic controls — Inhibition of the substantia nigra

Deransart, C, Lê-Pham, B.-T, Hirsch, E, Marescaux, Ch & Depaulis, A

In this experiment a possible GABAergic dysfunction in naive Wistar AS was investigated by [3H]muscimol autoradiography performed in seven Wistar AS and five non-epileptic rats. The density of [3H]muscimol binding sites in the SNR was significantly reduced (40%) in naive Wistar AS as compared to their controls. No significant difference was observed between the two strains at the cortical and superior

ScienceDirect

Effects of 5% male Wistar urine, 5% female Wistar urine, and 5% male Donryu urine on phospholipase C activity

Sasaki, Kazuyo, Okamoto, Kiyoko, Inamura, Kouhei, Tokumitsu, Yukiko & Kashiwayanagi, Makoto

Urine excreted not only from the male Wistar rat but also from the female Wistar and the male Donryu rat induced the accumulation of IP3 in the membrane preparation (Fig. 5a). The magnitude of IP3 accumulation induced by the female Wistar urine and male Donryu urine was similar to that induced by the male Wistar urine.



The Influence of Oral and Topical Channa striatus on Laparotomy Wound Healing in Malnourished Wistar Rat

Invention Journals & MehboobAlam Pasha1, Rezqa Abdullah Husin2, Syed Hassan1

ABSTRACT: Channa striatus is traditionally used for its salutary and medicinal value as a source of improved wound healing. Many studies have been conducted to scientifically explain this basis. The objective of our study was to evaluate the effects of Channa striatus on the tensile strength, epithelialisation, and fibroblastic proliferation in the healing of full thickness laparotomy wound in malnourished

Data-set provider: DataDryad

Data-set type: article

Preview:

Sheet1						
	A	B	C	D	E	F
1	Exposure name	Nr Litter	Exposure code	Adult body weight	L 2D	L 3D
2	Control	1	1	299	7.8665	9.3525
3		2	1	378.5	8.2765	9.62625
4		3	1	372	8.111	9.2505
5		4	1	372	8.452	9.762
6		5	1	365	8.4165	9.427

Title: Data from: Environmental levels of oestrogenic and antiandrogenic compounds feminize digit ratios in male rats and their unexposed male progeny

Authors: Auger, Jacques, Le Denmat, Dominique, Berges, Raymond, Doridot, Ludivine, Salmon, Benjamin, Canivenc-Lavier, Marie Chantal & Eustache, Florence

Date: 2013-08-07

Description: Digit length ratios, especially the second-to-fourth digit ratio (2D : 4D), are associated with various pathological and behavioural conditions in many species including humans and are dependent upon prenatal androgen to oestrogen balance. It is unknown whether digit ratios are modified by environmental exposure to ubiquitous endocrine disruptors. We studied the effect on adult male Wistar rat digit ratios of a gestational exposure to the oestrogenic and antiandrogenic compounds bisphenol A (BPA), genistein and vinclozolin, in low doses, and in combination with investigating in parallel a possible sexual dimorphism of this trait. We also investigated the effects on the male progeny not exposed during gestation. X-rays were taken of the left and right forepaws, and

<http://1i-demo.equalexper.com/>

user name=1i-demo; password=erasmus; search for “wistar rat”

Sneak preview: Data Profile Pilot

The screenshot shows the ScienceDirect interface for the article "Atherosclerosis" (Volume 231, Issue 1, November 2013, Pages 107-113). The article title is "Assessment of subclinical atherosclerosis and intraplaque neovascularization using contrast-enhanced ultrasound". The authors listed are Stijn C.H. van der Wal and Antonius F.V. van der Wal. The page features a navigation menu on the left with options like "Article outline", "Highlights", "Abstract", "Keywords", "Abbreviations", and "References". A central blue callout box contains the text: "Data Profile: structured account of what data has been used for this article (provided by the author)". On the right side, there is a "Data Profile for this article" section, which indicates that "3 data sets are linked to this article". It provides "Sample section results for experiment 1" with "Original data (xls, 4.2 MB)" and a "Short meaningful description of the data and keywords that is but not longer than two lines". Below this, it shows "Details" with a placeholder text: "Lorem ipsum dolor sit amet, consetetur sadipscing elitr, sed diam nonumy eirmod tempor invidunt ut labore et dolore magna aliquyam erat, sed diam voluptua. At vero eos et accusam et justo duo dolores et ea rebum. Stet clita kasd gubergren, no sea takimata sanctus est". There is also a "Download data" button. The "Sample section results for experiment 2" section shows "Original data (csv, 850 KB)".

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Atherosclerosis
Volume 231, Issue 1, November 2013, Pages 107-113

Assessment of subclinical atherosclerosis and intraplaque neovascularization using contrast-enhanced ultrasound

Stijn C.H. van der Wal
Antonius F.V. van der Wal

<http://dx.doi.org/10.1016/j.atherosclerosis.2013.11.011>

Highlights

- Subclinical atherosclerosis was detected in 90% of the patients with FH.
- IPN can be assessed using contrast-enhanced ultrasound of the carotid arteries.
- Plaques with an irregular or ulcerated surface exhibited significantly more IPN.
- IPN in plaques may provide information on the progression of atherosclerosis.

Abstract

Recommended articles

Citing articles (26)

Related reference work articles

Data Profile for this article

3 data sets are linked to this article

Sample section results for experiment 1

Original data (xls, 4.2 MB)

Short meaningful description of the data and keywords that is but not longer than two lines

▼ Details

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Download data

Sample section results for experiment 2

Original data (csv, 850 KB)

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- Recognizes the impact of scientific, technical and medical research on people's lives around the world
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 - shortlist from Elsevier's 1800+ journals
 - [Board members](#) from NGOs across the world
- Winning articles summarized in a lay summary by a scientific journalist and hosted on Atlas website
- Author receive the Atlas award and have their article free to access on ScienceDirect



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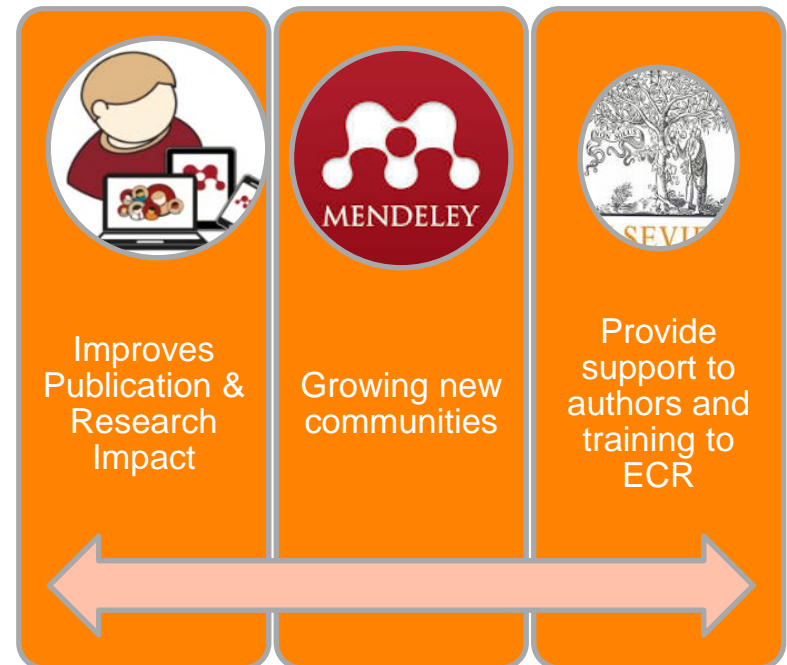
Increasing accessibility: STM Digest

- Collection of **layperson translations** of original research papers
- Translations created as a collaboration between **early career researchers** and authors
- Papers are selected by the community, based on perceived **societal impact** or **policy focus**
- Elsevier publishes the summaries next to the original article on ScienceDirect.



Benefits:

- Helps authors relate their research to a broader audience
- Connects Early Career Researchers with established authors
- Utilizes technology to create build communities to help translate science to society.



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Craft-beer bar *Kaschk*, Berlin

- Fun way to expand awareness of academic topics within society by bringing scientists to into pubs around the world
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Collaboration



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Known Academic user needs

(“must have / be able to”)*

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- Data integrity and security
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- Data Analysis
- Lab (project) level collaboration
- Provenance
- Recognition of experiments done and data created**

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Research Data: Mendeley data repository

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Periphyton data set

DOI: [10.17632/5cxx9nvc4.1](https://doi.org/10.17632/5cxx9nvc4.1)

Version 1 | Published: 2 Jul 2015

Author(s): [Jaques Zanon](#)

To mendeley

XLS

301 KB



Download

Abstract

In addition to playing an empirical role in establishing a close characterization of ecological communities, species abundance distribution enables the comparison of different communities with a compact description of structures. Several models seek proper understanding of this distribution. Yet, only two models are currently more common: log-series and log-normal. Studies on these patterns raise theories seeking an improved understanding. In this context, Hubbell proposes a neutral model (Unified Neutral Theory) under dynamic zero-sum known as zero-sum multinomial (ZSM) species abundance distribution model bringing renewed understanding and discussion. Since the neutral theory is expressly related to communities of non-motile organisms, the periphytic algal community represents an excellent group to have patterns and ecological theories investigated. Thereby, the objective of this study is the assessment of periphytic algal community structure supported by the Neutral Theory. Data include samples of petioles from three banks of the *Eichhornia azurea* (Sw.) Kunth aquatic macrophyte (n=45). The zero-sum assumption was not reached and the non-neutral model (log-normal distribution) fit more satisfactorily. Hence, in the context of our results we present two conclusions: the periphytic algal community dynamics cannot be regarded as neutral and the structuring was not through ecological drift. Our study reveals the relevance of periphytic algal communities as object of study for ecological theories and concepts and the necessity of expanding the number of samplings as well as substrates.

Cite this dataset

Zanon, Jaques (2015),
"Periphyton data set", v1

<http://dx.doi.org/10.17632/5cxx9nvc4.1>

Latest version

Version 1

2015-07-02

Published: 2015-07-02

DOI: [doi:10.17632/5cxx9nvc4.1](https://doi.org/10.17632/5cxx9nvc4.1)

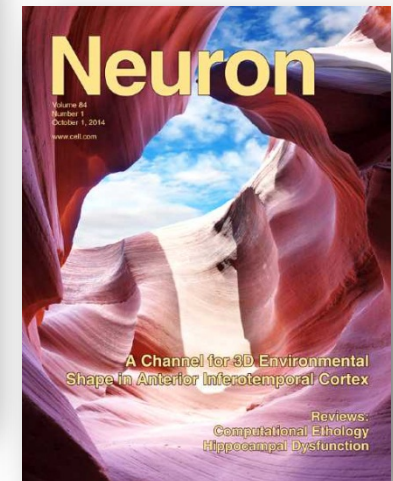
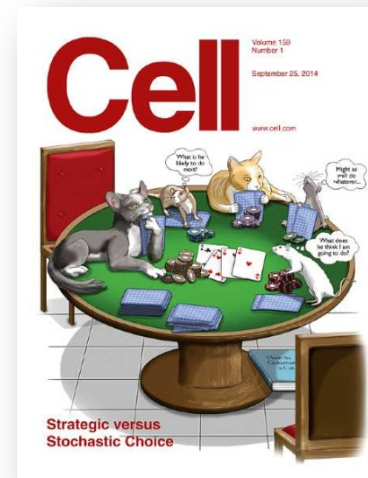
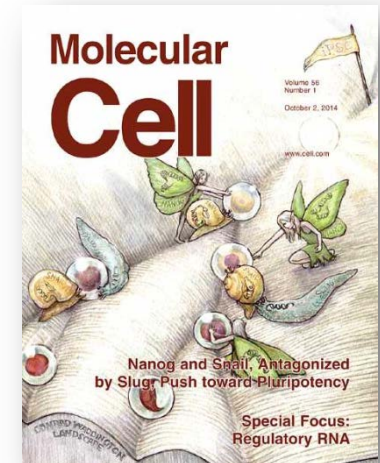
Licences

<https://data.mendeley.com/datasets/5cxx9nvc4/1#>

Password is "alpha"

Collaborative Peer Review

- Pilots to conduct peer review in the Mendeley environment
- Reviewers remained anonymous to one another
- In one pilot, reviewers encouraged to perform the review end-to-end in Mendeley, including annotating the PDF directly in addition to providing summary comments
- Next pilots will include authors
- We now plan to expand our ability to implement this approach more broadly



Metrics



Metrics and Open Science

Two distinct themes:

1. Metrics are an output of science themselves, therefore we can discuss the “openness” of a metric
2. Metrics are used to measure and describe science, therefore we can discuss how they are used to measure and describe Open Science, and in terms of social impact

Elsevier's Metrics Manifesto

- A diversity of metrics is essential
- The methodologies should be open and data agnostic
- Metrics should be transparent, valid and replicable
- Definitions should be owned by the community
- Metrics should be used appropriately
- No proprietary / black-box metrics



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Science

Volume 348, Issue 6237, 22 May 2015, Page 847

Ancient DNA pinpoints paleolithic liaison in Europe: Romanian fossil was the great-great-great-grandson of a Neanderthal - But an evolutionary dead end (Short Survey)

Gibbons, A.

Abstract

[No abstract available]

Indexed keywords

EMTREE drug terms: DNA

GEOBASE Subject Index: DNA; evolutionary biology; fossil record; Neanderthal; paleobiology; Paleolithic

EMTREE medical terms: Antiquity; Europe; evolution; fossil; genome; Homo neanderthalensis; human; human genome; Survey

Regional Index: Romania

Chemicals and CAS Registry Numbers: DNA, 9007-49-2

ISSN: 00368075 CODEN: SCIEA Source Type: Journal Original language: English

DOI: 10.1126/science.348.6237.847 Document Type: Short Survey

Publisher: American Association for the Advancement of Science

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