Efekti otvorene nauke – insentivi za istraživače koji primenjuju otvorenu nauku

Effects of open science – incentives for researchers practising open science

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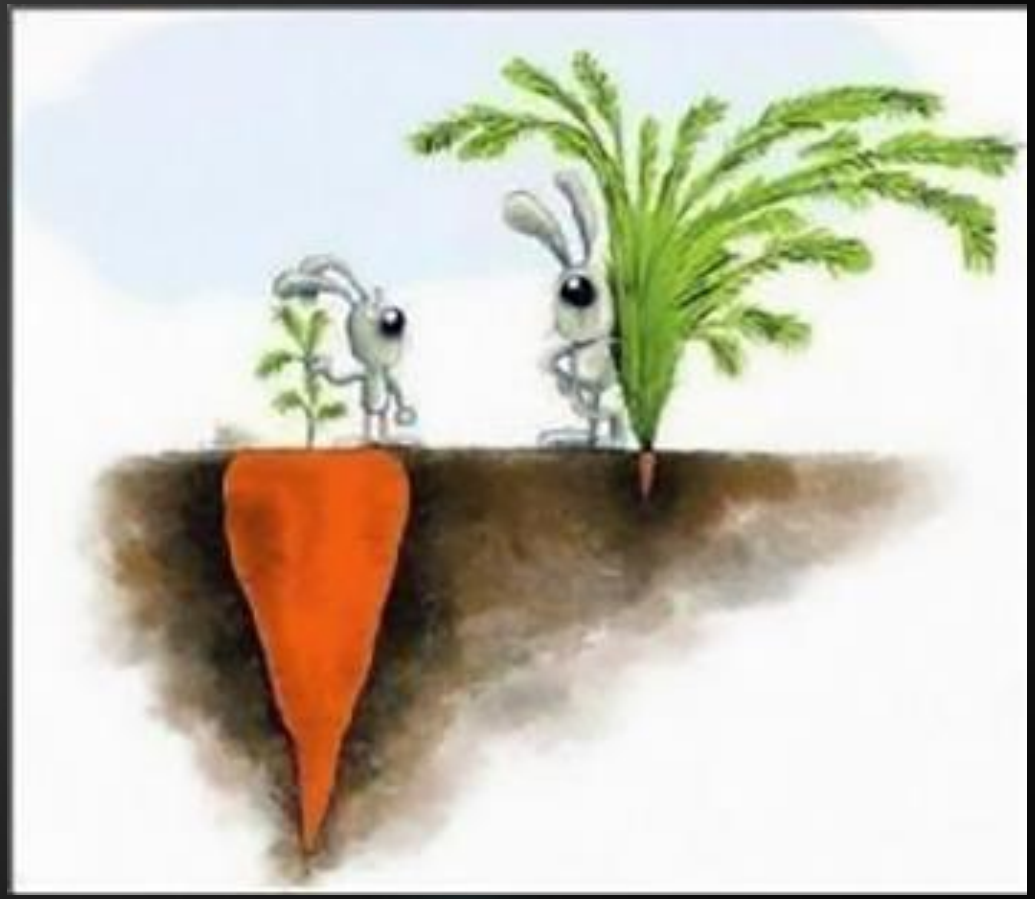
Dani otvorene nauke, Beograd, Srbija
Novembar 2020



Where these patterns originate from?

Biases in publishing

Editorial: of 79 editors of high impact journals 94% claims they do not encourage replications (Madden, 1995)

Reviewer: 60% reviewers favour novel findings over replications – "waste of journal space" (Neuliep & Crandall, 1993)

Author: probability of submitting a positive finding 8 times higher than submitting a negative finding (Greenwald, 1975)

Where these patterns originate from?

Wrong incentives for science research

Competitiveness

Innovation favored over robustness of findings

”Null findings” devalued

Quantity favored over quality – “Publish or perish”

"You are completely free to carry out whatever research you want, so long as you come to these conclusions."

Who gets to incentivize open science practices?

The agents which promote standards for good science

Journal editors (publishing policies)

Academic institutions (employment and advancement policies)

Funding bodies (resource allocation policies)

Incentives for scientists – why should I spend my **valuable** time to share the data?

Making data publicly available is time-consuming

„Badges are simple, effective signals to promote open practices and improve preservation of data and materials by using independent repositories.“

Commentary

aps ASSOCIATION FOR PSYCHOLOGICAL SCIENCE

Psychological Science
2015, Vol. 26(5) 653–656
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DOI: 10.1177/0956797614553946
pss.sagepub.com
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Assessing the Robustness of Power Posing: No Effect on Hormones and Risk Tolerance in a Large Sample of Men and Women

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Received 4/24/14; Revision accepted 8/19/14

PLOS | BIOLOGY

META-RESEARCH ARTICLE

Badges to Acknowledge Open Practices: A Simple, Low-Cost, Effective Method for Increasing Transparency

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Citation: Kidwell MC, Lazarević LB, Baranski E, Hardwicke TE, Piechowski S, Falkenberg L-S, et al. (2016) Badges to Acknowledge Open Practices: A Simple, Low-Cost, Effective Method for Increasing Transparency. PLoS Biol 14(5): e1002456. doi:10.1371/journal.pbio.1002456

Academic Editor: Malcolm R Macleod, University of Edinburgh, UNITED KINGDOM

Published: May 12, 2016

Data Availability Statement: All data and materials

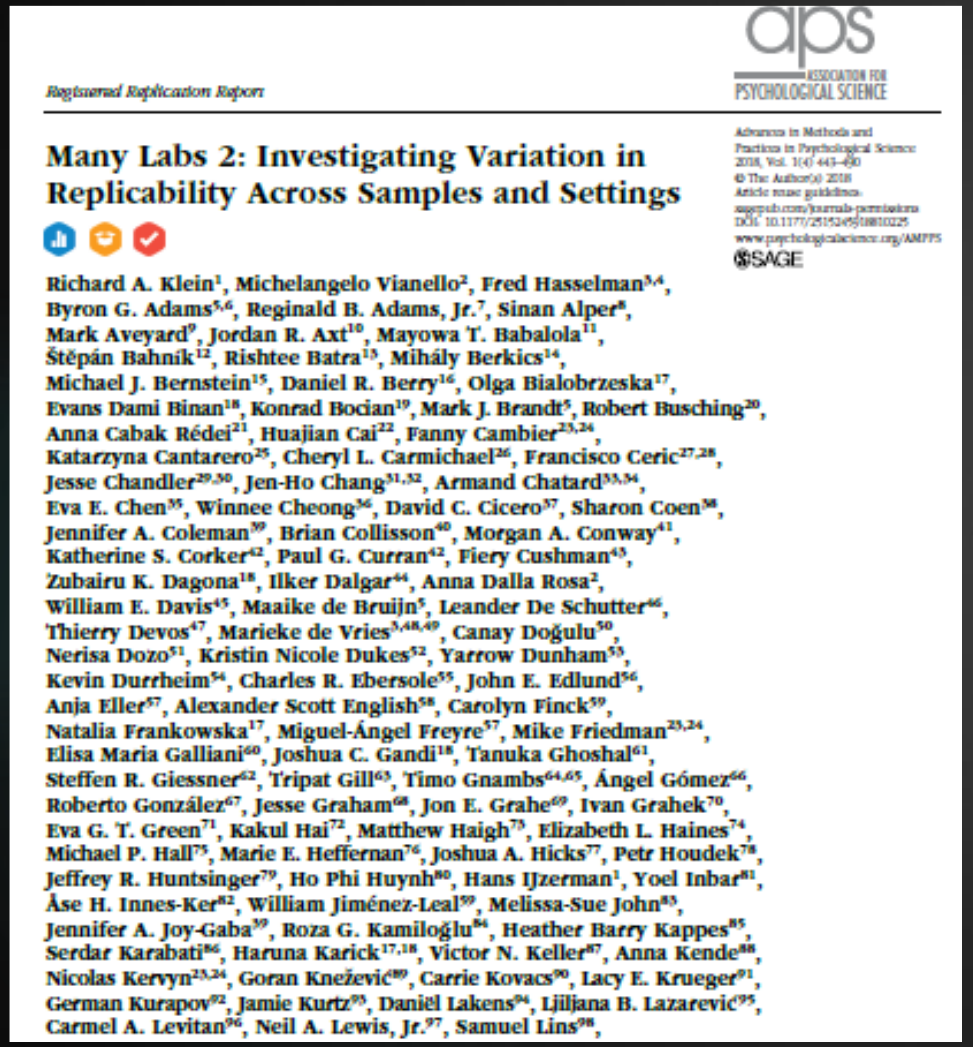
Abstract

Beginning January 2014, *Psychological Science* gave authors the opportunity to signal open data and materials if they qualified for badges that accompanied published articles. Before badges, less than 3% of *Psychological Science* articles reported open data. After badges, 23% reported open data, with an accelerating trend; 39% reported open data in the first half of 2015, an increase of more than an order of magnitude from baseline. There was no change over time in the low rates of data sharing among comparison journals. Moreover, reporting openness does not guarantee openness. When badges were earned, reportedly available data were more likely to be actually available, correct, usable, and complete than when badges were not earned. Open materials also increased to a weaker degree, and there was more variability among comparison journals. Badges are simple, effective signals to promote open practices and improve preservation of data and materials by using independent repositories.

Badges to Acknowledge Open Practices

- Why is this important?
  - Current norms in publishing do not provide incentives for researchers to share data, materials or study designs.
  - Journals can provide this kind of incentive through acknowledging open practices.
- What if open practices are not possible or advisable? (For example, sharing some human participant data could violate confidentiality.)
  - When badge criteria cannot be met, a description in place of the badge can articulate why.
  - Disclosure makes explicit the conditions under which the ethic of openness is superseded by other ethical concerns.

Badges do not define quality of the study; badges certify that a particular practice was followed.



Registered Replication Report

aps ASSOCIATION FOR PSYCHOLOGICAL SCIENCE

Many Labs 2: Investigating Variation in Replicability Across Samples and Settings

Advances in Methods and Practices in Psychological Science
2018, Vol. 1(4) 443–490
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DOI: 10.1177/2515245918810225
www.psychologicalscience.org/AMPPS
SAGE

Richard A. Klein[1], Michelangelo Vianello[2], Fred Hasselman[3,4], Byron G. Adams[5,6], Reginald B. Adams, Jr.[7], Sinan Alper[8], Mark Aveyard[9], Jordan R. Axt[10], Mayowa T. Babalola[11], Štěpán Bahník[12], Rishtee Batra[13], Mihály Berkics[14], Michael J. Bernstein[15], Daniel R. Berry[16], Olga Bialobrzeska[17], Evans Dami Binan[18], Konrad Bocian[19], Mark J. Brandt[5], Robert Busching[20], Anna Cabak Rédei[21], Huajian Cai[22], Fanny Cambier[23,24], Katarzyna Cantarero[25], Cheryl L. Carmichael[26], Francisco Ceric[27,28], Jesse Chandler[29,30], Jen-Ho Chang[31,32], Armand Chatard[33,34], Eva E. Chen[35], Winnee Cheong[36], David C. Cicero[37], Sharon Coen[38], Jennifer A. Coleman[39], Brian Collisson[40], Morgan A. Conway[41], Katherine S. Corker[42], Paul G. Curran[42], Fiery Cushman[43], Zubairu K. Dagona[18], Ilker Dalgar[44], Anna Dalla Rosa[2], William E. Davis[45], Maaike de Bruijn[5], Leander De Schutter[46], Thierry Devos[47], Marieke de Vries[5,48,49], Canay Doğulu[50], Nerisa Dozo[51], Kristin Nicole Dukes[52], Yarrow Dunham[53], Kevin Durrheim[54], Charles R. Ebersole[55], John E. Edlund[56], Anja Eller[57], Alexander Scott English[58], Carolyn Finck[59], Natalia Frankowska[17], Miguel-Ángel Freyre[57], Mike Friedman[23,24], Elisa Maria Galliani[60], Joshua C. Gandi[18], Tanuka Ghoshal[61], Steffen R. Giessner[62], Tripat Gill[63], Timo Gnambs[64,65], Ángel Gómez[66], Roberto González[67], Jesse Graham[68], Jon E. Grahe[69], Ivan Grahek[70], Eva G. T. Green[71], Kakul Hai[72], Matthew Haigh[73], Elizabeth L. Haines[74], Michael P. Hall[75], Marie E. Heffernan[76], Joshua A. Hicks[77], Petr Houdek[78], Jeffrey R. Huntsinger[79], Ho Phi Huynh[80], Hans IJzerman[1], Yoel Inbar[81], Åse H. Innes-Ker[82], William Jiménez-Leal[59], Melissa-Sue John[83], Jennifer A. Joy-Gaba[39], Roza G. Kamiloğlu[84], Heather Barry Kappes[85], Serdar Karabati[86], Haruna Karick[17,18], Victor N. Keller[87], Anna Kende[88], Nicolas Kervyn[23,24], Goran Kneževi[89], Carrie Kovacs[90], Lacy E. Krueger[91], German Kurapov[92], Jamie Kurtz[93], Daniël Lakens[94], Ljiljana B. Lazarevi[95], Carmel A. Levitan[96], Neil A. Lewis, Jr.[97], Samuel Lins[98],

https://doi.org/10.24839/2325-7342.JN21.2.98

Self-Esteem, Self-Disclosure, Self-Expression, and Connection on Facebook: A Collaborative Replication Meta-Analysis

Dana C. Leighton*, Southern Arkansas University; Nicole Legate*, Illinois Institute of Technology; Sara LePine, Gordon College; Samantha F. Anderson, University of Notre Dame; Jon Grahe*, Pacific Lutheran University

ABSTRACT. This replication meta-analysis explored the robustness of a highly cited study showing that those with low self-esteem perceived benefits for self-disclosure through Facebook compared to face-to-face interactions (i.e., Forest & Wood, 2012, Study 1). Seven preregistered direct replication attempts of this study were conducted by research teams as part of the Collaborative Replication and Education Project (CREP), and results were meta-analyzed to better understand the strength and consistency of the effects reported in the original study. Half of the original results were clearly supported: Self-esteem negatively predicted perceived safety of self-disclosure on Facebook as compared to face-to-face interactions (meta-analytic effect size = -.28, original effect size = -.31), and self-esteem did not relate to perceived opportunities for self-expression; across the 7 replications, all 95% confidence intervals (CIs) for effect sizes included 0. However, 2 other findings received less support: Self-esteem only weakly and inconsistently predicted perceived advantages of self-disclosure on Facebook (meta analytic effect size = -.16, original effect size = -.30), and contrary to the original study, there was no evidence for self-esteem predicting perceived opportunities for connection with others on Facebook (6 of the 7 replication effect size CIs contained 0). The results provided further evidence regarding the original study's generalizability and robustness. The implications of the research and its relevance to social compensation theory is presented, and considerations for future multisite replications are proposed.

OPEN DATA
OPEN MATERIALS
PREREGISTERED
REPLICATIONS

Open Data, Open Materials, Preregistration, and Replications badges earned for transparent research practices. Data and materials are available at https://osf.io/ybr9w/. Links to Preregistrations for each project are available at https://osf.io/ybr9w/.

Among social network sites, Facebook is a dominant platform that affects the thinking, emotions, behavior, and interactions of its active users, some two billion people worldwide, including 70% of the U.S. population (Facebook, 2017; Fiegerman, 2017; Kemp, 2017). It is therefore important that psychologists better understand how Facebook use is related to psychosocial factors. Indeed, since its advent in 2004, scholars have published over a thousand articles on psychological issues related to Facebook.

Forest and Wood (2012) provided one of the first and most highly cited psychological examinations of Facebook use and psychosocial factors. As of December 2017, Elsevier's Scopus citation metrics show the article has been cited 145 times (12.17

*faculty mentor

The role of academic journals: TOP guidelines

Citation Standards Describes citation of data	**Data Transparency** Describes availability and sharing of data
Analytical Methods Transparency Describes analytical code accessibility	**Research Materials Transparency** Describes research materials accessibility
Design and Analysis Transparency Sets standards for research design disclosures	**Preregistration of Studies** Specification of study details before data collection
Preregistration of Analysis Plans Specification of analytical details before data collection	**Replication** Encourages publication of replication studies

ACROSS 3 TIERS

1 **DISCLOSURE:** the final research output must disclose if the work satisfies the standard

2 **REQUIREMENT:** the final research output must satisfy the standard

3 **VERIFICATION:** third party must verify that the standard is being met

The role of academic journals: TOP guidelines

OVER 5,000 JOURNAL SIGNATORIES

Center for Open Science announces Elsevier as new signatory to TOP Guideline

Elsevier develops and implements comprehensive new journal data guidelines

The role of higher education institutions (HEIs)

To adopt and apply the open science and research principles of the OSR Initiative in their policies, operations and practices.

University level policies and guidelines need to address why openness of research is important and give instructions concerning open research methods and open access publishing.

At the same time, HEIs need to develop services and infrastructures to support open science, as well as to provide training for researchers related to data management planning and data preservation.

Open teaching resources (especially textbooks) present another challenge for OSR implementation. HEIs need to be supported by funding bodies and academic community to make this endeavor succesfull.

DORA

Declaration On Research Assessment

Improving how research is assessed

DORA background

- To improve ways in which scientific output is valued and evaluated, a group of editors and publishers of scholarly journals met during the Annual Meeting of The American Society for Cell Biology (ASCB) in San Francisco, CA, on December 16, 2012.
- The group developed a set of recommendations, referred to as the San Francisco Declaration on Research Assessment.

July 2020:

Signed by >19,75 organizations and >16,000 individuals

Meaningful Assessment Improves Research

Promotes value of all scholarly outputs

- Journal articles
- Preprints
- Datasets
- Software
- Protocols
- Research materials
- Well-trained researchers
- Societal outcomes and policy changes

Focuses on the merits of the work

- Reduces JIF-chasing
- Facilitates Open Science practices
- Improves rigor and reliability
- Enhances collaboration

We love

DORA

DORA's vision

The declaration provides recommendations to stimulate positive action by:

- Funders
- Research institutions
- Publishers
- Metrics providers
- Researchers

DORA Ideas for Action

Five design principles for institutions

1. Instill standard and structure into research assessment processes
2. Foster a sense of personal accountability
3. Prioritize equity and transparency of research assessment processes
4. Take a portfolio view toward researcher contributions
5. Refine research assessment processes through iterative feedback

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Change is happening: Funders

How we judge research outputs when making funding decisions

Published: 8 August 2018

Open access

Robert Kiley, Head of Open Research, and Jim Smith, Director of Science, discuss the steps Wellcome is taking to fulfil the principles of the San Francisco Declaration on Research Assessment (DORA).

When we published our open access policy over a decade ago, we made it clear that what counts when we make funding decisions is the intrinsic merit of the work and not the journal or publisher.

Credit: Science Photo Library

A researcher's skills, qualities and attitudes can never be expressed in a single metric.

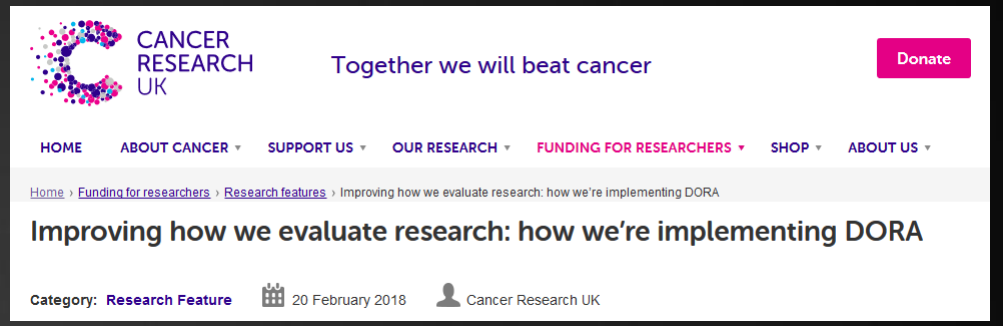
Wellcome

London, United Kingdom

Application includes:

- List of research outputs
- Contributions to mentorship
- Output sharing plan to advance potential health benefits
- Plans for public engagement

Guidance provided to advisory panel members



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Home › Funding for researchers › Research features › Improving how we evaluate research: how we're implementing DORA

Improving how we evaluate research: how we're implementing DORA

Category: Research Feature 20 February 2018 Cancer Research UK

Cancer Research UK

London, UK

Application includes:

- List of research outputs
- Summary of 3-5 achievements
- Space to describe other measures of impact

Reminds peer reviewers and committee members of DORA principles throughout funding process

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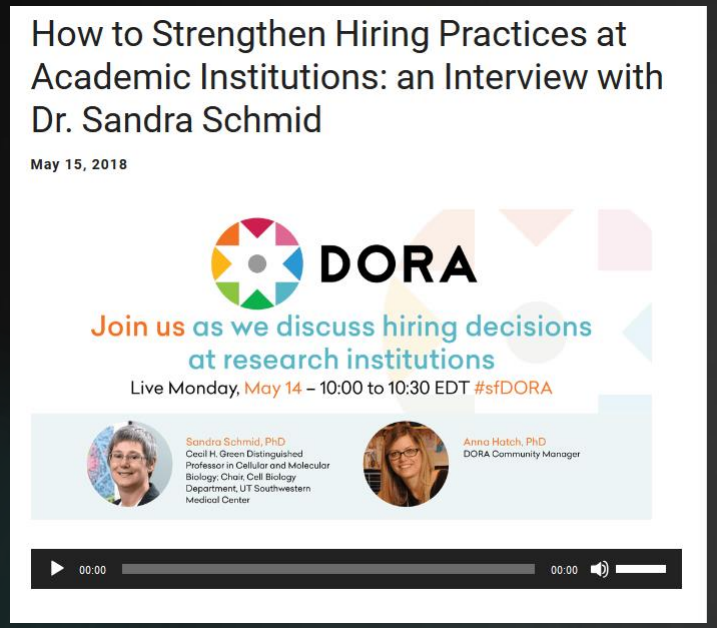
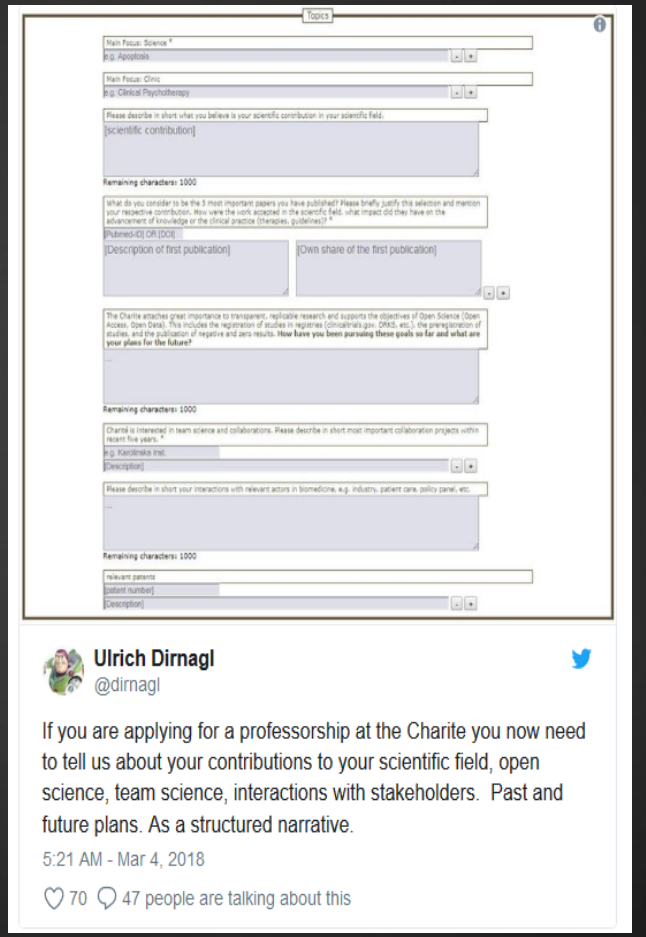
Change is happening: Research Institutes



UT Southwestern Medical Center
Dallas, Texas

Candidates receive questions before Skype interviews, so they have time to reflect. The goal is to identify thoughtful individuals, in addition to candidates who process information quickly.



Charité University Hospital
Berlin, Germany

Application includes:
- Contribution to research field
- Open Science
- Team Science
- Interactions with stakeholders

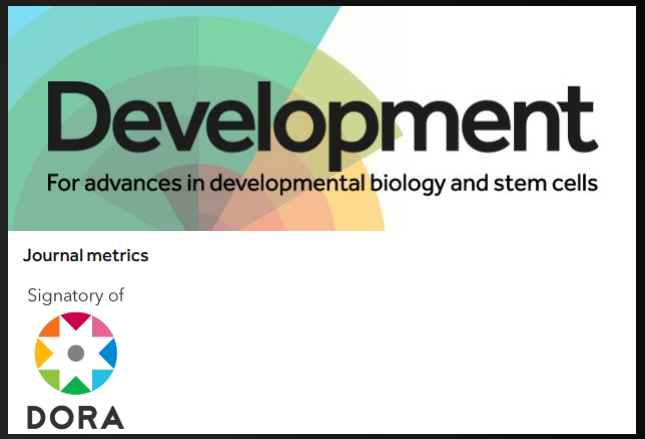
Staff member sits on hiring deliberation meetings as a neutral party to promote balanced discussions

We love DORA

Change is happening: Publishers

PLOS
San Francisco, California

Dedicated page on website describing how its journals comply with DORA recommendations



The Company of Biologists
Cambridge, UK

"Development uses a number of metrics that together provide a rich view of the journal's performance"

EMBOpress

EMBO Press
Heidelberg, Germany

- Acknowledges DORA signature
- Shows citation distributions for its journals
- Presents all available metrics side-by-side and rounded to single digits

We love
DORA

Thank you!

Contact: ljiljana.lazarevic@f.bg.ac.rs
website: https://lira.f.bg.ac.rs/sr/clanovi-lira/dr-ljiljana-b-lazarevic/

Dropbox folder with all the materials

"Ova prezentacija je rezultat rada na projektu „Boosting EOSC readiness: Creating a scalable model for capacity building in RDM", koji finansira Evropska unija u okviru projekta H2020-EU.1.4.1.1. EOSC Secretariat br. 831644."

"This presentation results from the project „Boosting EOSC readiness: Creating a scalable model for capacity building in RDM", financed by the European Union, H2020-EU.1.4.1.1. EOSC Secretariat no. 831644."