

# Open Access Infrastructure for Research in Croatia

Jadranka Stojanovski

University of Zadar / Ruđer Bošković Institute, Zagreb  
Croatia

Digital Presentation and Preservation of Cultural and Scientific  
Heritage - DIPP2015, Veliko Tarnovo, Bulgaria, 28-30 September  
2015



# Outline

- Croatia
- OA policies
- OA journals (gold)
- repositories (green)
- conclusions

# Croatia

- 4.4M population
- 32,2k registered, 11k active scholars
- 7 universities, 25 research institutes
- Ministry of Science, Education and Sports
  - 241 research projects (National Research Foundation), EC projects
- 25k papers (all types) per year
  - 380 OA journals
  - more than 1200 islands



Croatia Map - ©2006 Destination360



# OA in Croatia

- 1997 – the first bibliography with repository features CROSBI
- 2006 – Croatian OA journals platform – HRČAK
- 2007 – first institutional repositories (ePrints)
- 2013 – partnership in OpenAIRE
- 2013 – national mandate for thesis
- 2015 – first institutional mandate at RBI
- 2015 – common infrastructure for institutional repositories DABAR



# Policies

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# Policies



- ▶ waiting for top-down OA initiatives could take to much time
- ▶ bottom-up initiatives are giving better results, but cannot replace top-down initiatives
- ▶ even one sentence from the government strategies, regulations and laws could be used and help significantly ;)
- ▶ Croatian OA Declaration (2012)

- 
- Science and Technology Policy 2006-2010:  
***“the S&T system, which is financed by public resources, should be open to the public ... and ... results of R&D financed by public resources must be accessible to the public in the form of open publications or databases”***

<http://public.mzos.hr/fgs.axd?id=14189>

- National Strategy of education, science and technology 2014:  
***“open access to the research information as the result of public funding will be established”***

<https://www.azvo.hr/images/stories/prilozi/Strategija%20obrazovanja%20znanosti%20i%20tehnologije%20Republike%20Hrvatske.docx>

# CROATIAN OPEN ACCESS DECLARATION



- *„We are inviting the state administration, headed by the ministry responsible for science, as well as scientific and educational institutions, organisations, professional associations, and all the others involved in gathering and publishing scientific information to act decisively and in coordination in order to store all the Croatian scientific information in Open Access form.“*

<http://www.fer.unizg.hr/oa2012/declaration>





# Mandates

- ▶ Law of Science and Higher Education (November 2013):  
“**Student graduation thesis** must be permanently published at publicly available library web site, and the copy must be deposited in the publicly available repository in the National and University Library” and “**Doctoral thesis** must be permanently deposited in the publicly available repository in the National and University Library”
- ▶ The first institutional Open Access mandate was recently adopted by Ruđer Bošković Institute in Zagreb. As of April 17, 2015, **all papers produced by Rudjer Boskovic Institute (RBI) researchers must be submitted to the institutional OA repository FULIR**



# Journals (gold)

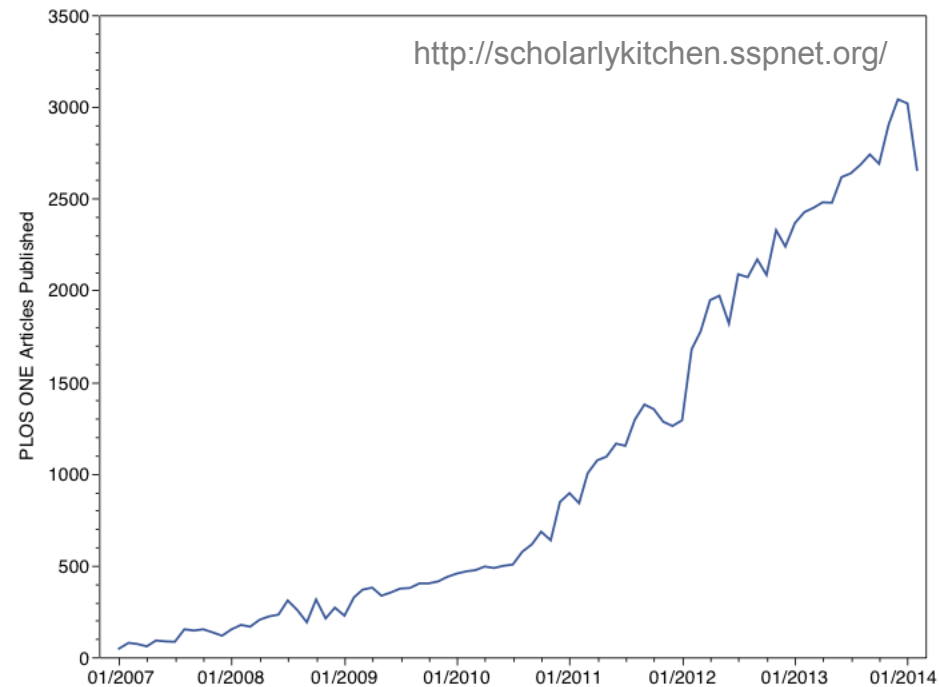
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# Journals

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- fee and free journals
- „OA journal” as a synonym for APC model
- journals? - or more portals
- very prominent journals = high JIF journals = very for-profit journals
- „international journals” and „local journals”
- „regional journals”



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# Journals – questions

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- journal as an old concept from the printed world
- journals slowing down a possible development of science (?), not implementing ICT advantages and possibilities...
- ...or implementing it at very slow pace
- journal as (still) main channel of scholarly communication

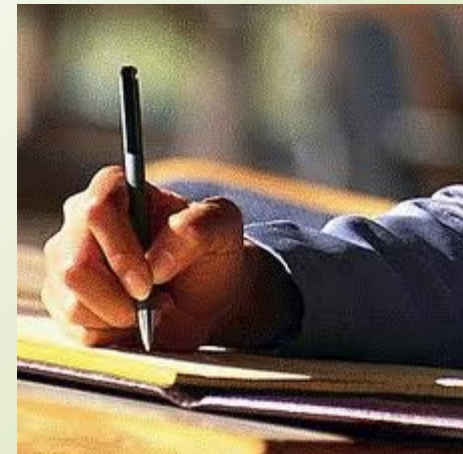
# What's about journals from the scientific semi-periphery?



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# Why are Croatian journals important?

- Protect excellence in locally relevant research (Leiden Manifesto);
- Development of terminology in Croatian language;
- Close editorial guidance of young researchers;
- Development of editorial and publishing skills in digital environment;
- Bridging the gap between science and application inside community;



# Why are Croatian journals important?

- Benefits for the development of the research and academic culture – considering ethical issues and scientific integrity
- Building the reputation of the locally scientific community
- Development of the evaluation criteria, impact of the research is not reflected through citations only
- Lower cost of publishing concerning high Article Processing Charges (APC)
- Easy access to the research results for the community (OA)
- Content in Croatian language can be spread to a wider local community – no language barriers



# OA journals repository as a solution for...

- low visibility
- difficulties with distribution
- small number of subscribers
- low circulation
- insufficient finances
- poor infrastructure (including ICT)
- low readability
- low citation impact



# HRČAK (*hamster*)

goals

## history

- 2002 – few journals online
- 2005 – HRČAK project proposal
- 2006 – HRČAK launch

- infrastructure for **online version** of the (printed) journal
- **single access point** for all Croatian open access journals (scholarly, professional and popular)
- metadata and **full-text** articles repository
- **metadata sharing** – international repositories, databases, archives



# http://hrcak.srce.hr



## About Hrčak



Hrčak is the central portal of Croatian scientific journals. Hrčak offers the access to the journals following the Open Access Initiative (more [about Hrčak](#) in Croatian only).

About Hrčak (in Croatian only)

- for end users.

### Hrčak stats:

Journals: 393  
Published issues: 10.648  
Published articles: 135.651  
Published articles with full text: 129.874

**393 journals**

**129.874 articles**

### 10 newest issues online by publish date

1. Metallurgy, 55(1), 2016
2. Metallurgy, 54(4), 2015
3. Journal of Sustainable Development of Energy, Water and Environment, 1(1), 2015
4. Acta pharmaceutica, 54(1), 2015
5. Medicinski glasnik, 54(1), 2015
6. CIT. Journal of Technological Innovation, 1(1), 2015
7. Journal of Sustainable Development of Energy, Water and Environment, 1(1), 2015
8. EFZG Vjesnik, 1(1), 2015
9. Opuscula Mathematica, 37(1), 2015
10. Medica Jadertina, 45(1-2), 2015

### 10 latest issues online published on Hrčak

1. Agronomy journal, 48(3), 1986
2. Croatica Christiana Periodica, 39(75), 2015
3. Medicina Fluminensis, 51(3.), 2015
4. Journal of Sustainable Development of Energy, Water and Environment, 1(1), 2015
5. Acta pharmaceutica, 54(1), 2015
6. Medicinski glasnik, 54(1), 2015
7. CIT. Journal of Technological Innovation, 1(1), 2015
8. Journal of Sustainable Development of Energy, Water and Environment, 1(1), 2015
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Article search

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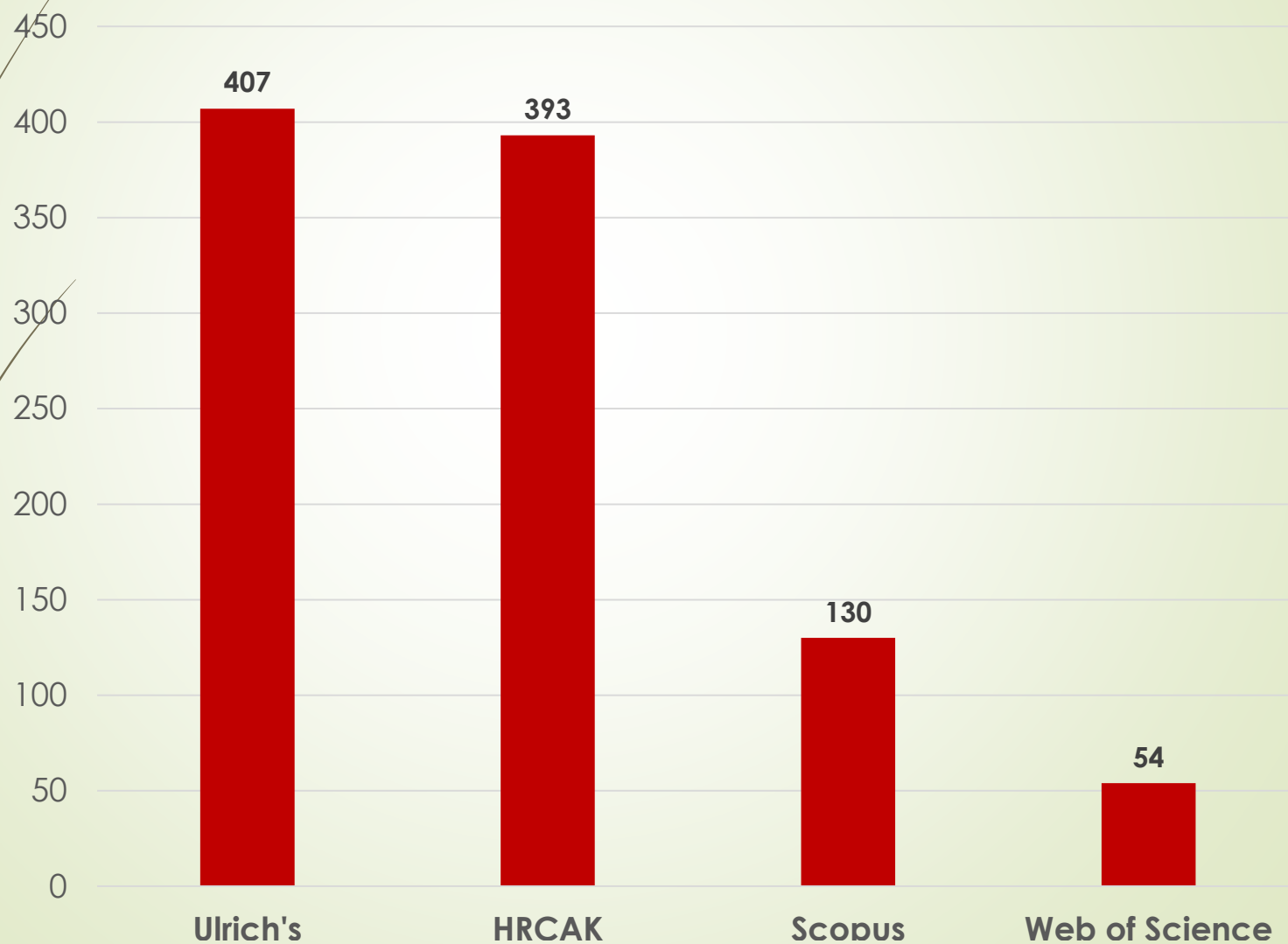
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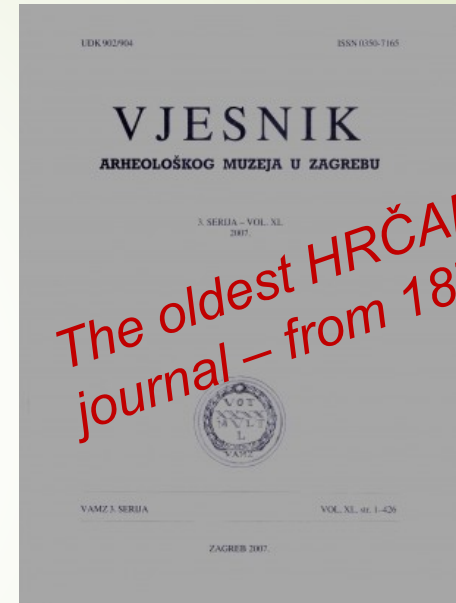
HRČAK is maintained by the University Computing Department (SRCE) and developing in the collaboration with HRČAK Advisory Board.

# Visibility of the Croatian journals

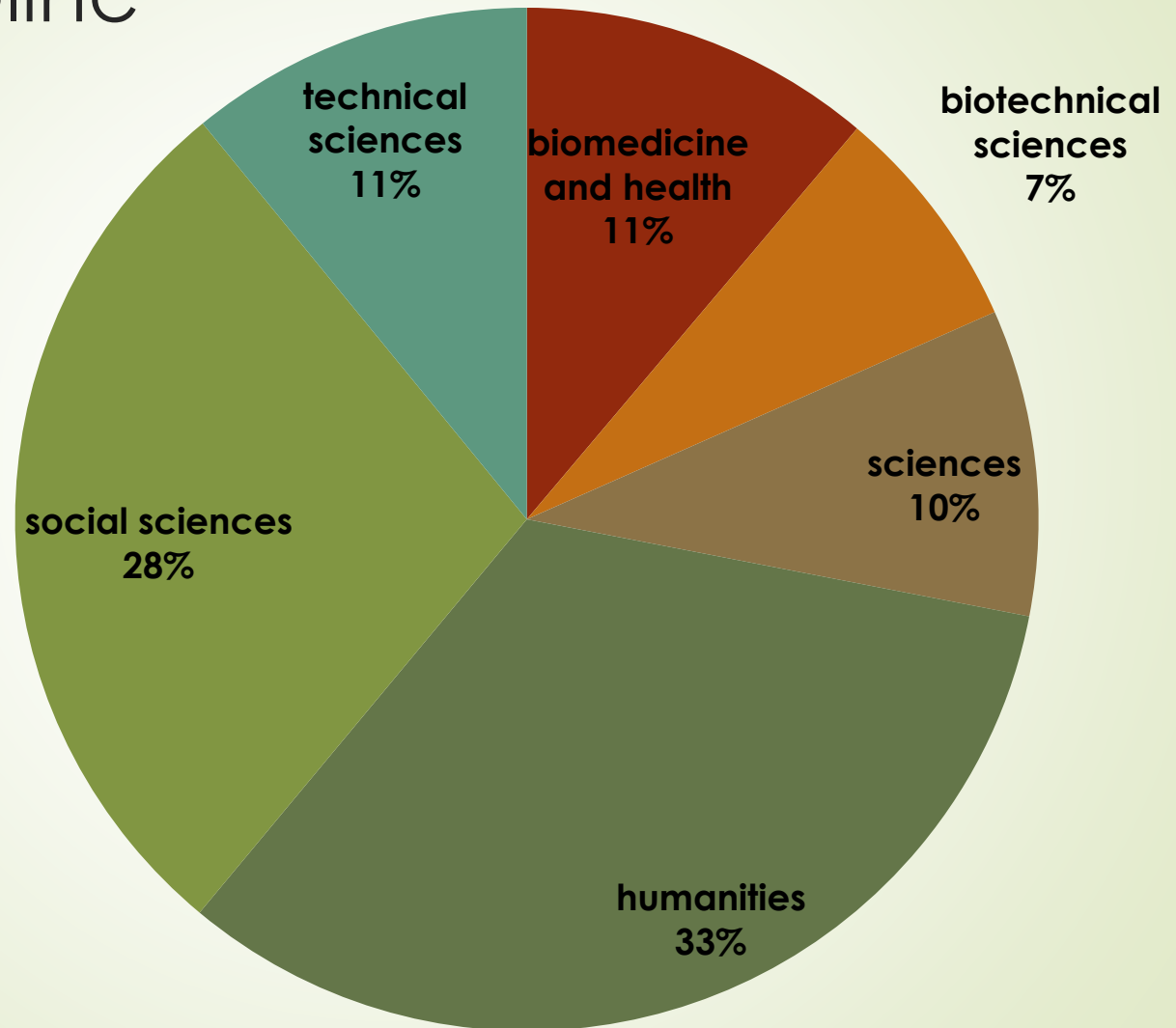


# Top ten journals by content (# of full-text papers):

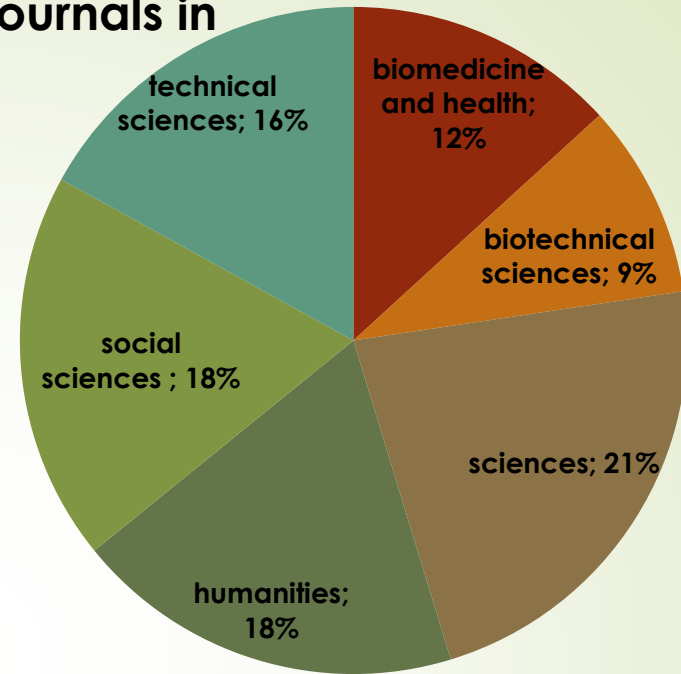
- Theological Review (6278)
  - Dairy Industry (3745)
  - Political Thought (3295)
- Collegium Antropologicum (3211)
- Acta stomatologica Croatica (2899)
  - Church in Society (2830)
  - Renewed Life (2728)
- Folk Art: Croatian Journal of Ethnology and Folklore Research (2630)
  - Acta Clinica Croatica (2443)
  - Croatica Chemica Acta (2078)



# HRČAK journals by discipline



## HRCAK journals in WoS



visibility

393 scholarly, professional and popular OA journals included in HRČAK

all in Google Scholar (GS)

102 in DOAJ

53 in WoS (15 in Current Contents)

130 in Scopus (+37 inactive)

...

# HRČAK

- improved communication with editors
- improvements of the editorial policies
- improved communication between editorials
- education
- visibility: indexing in popular fee and OA databases, archives and repositories



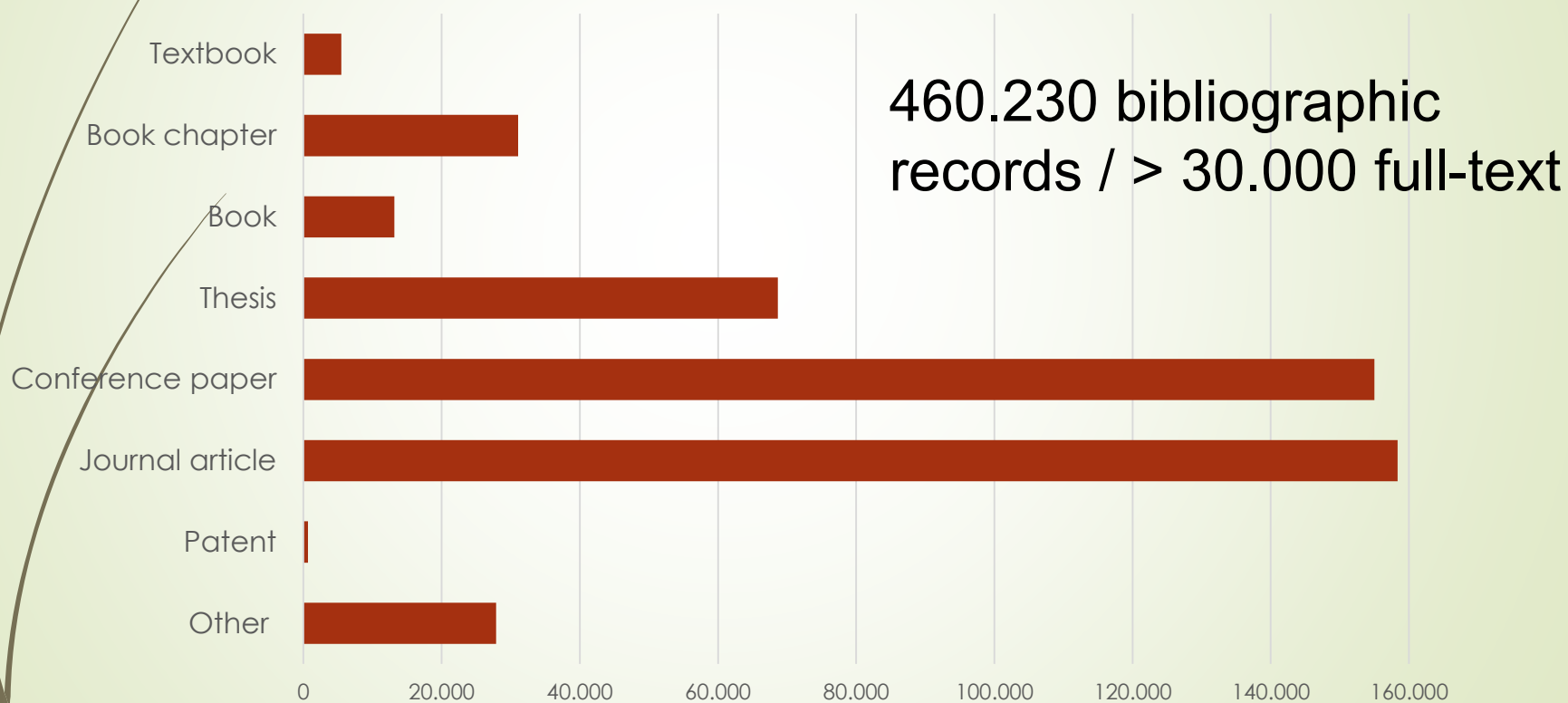




# Repositories (green)

DIPP2015, Veliko Tarnovo, Bulgaria, 28-30 September 2015

# Croatian Scientific Bibliography CROSBIB (1997)



# Traditional interface with some refreshments, e.g. altmetrics data

Autori: Domazet-Lošo, Tomislav; Klimovich, A; Anokhin, B; Anton-Erxleben, H; Hamm, MJ; Lange, C; Bosch, Thomas

Naslov: Naturally occurring tumours in the basal metazoan Hydra.

Hydra (Cnidaria: Hydrozoa): Domazet-Lošo, Tomislav, et al., 2013, PNAS

Naslov: Animals in a bacterial world : a new imperative for the life sciences

IzvorNIK: Proceedings of the National Academy of Sciences of the United States of America (0027-8424) **110** (2013), 9; 3229-3236

Vrsta rada: pregledni rad

Ključne riječi: bacterial roles animal origins | reciprocal effects animal–bacterial genomics | bacteria-driven development | microbiome and host physiology | nested ecosystems

Sažetak: In the last two decades, the widespread application of genetic and genomic approaches has revealed a bacterial world astonishing in its ubiquity and diversity. This review examines how a growing knowledge of the vast range of animal–bacterial interactions, whether in shared ecosystems or intimate symbioses, is fundamentally altering our understanding of animal biology. Specifically, we highlight recent technological and intellectual advances that have changed our thinking about five questions: how have bacteria facilitated the origin and evolution of animals ; how do animals and bacteria affect each other's genomes ; how does normal animal development depend on bacterial partners ; how is homeostasis maintained between animals and their symbionts ; and how can ecological approaches deepen our understanding of the multiple levels of animal–bacterial interaction. As answers to these fundamental questions emerge, all biologists will be challenged to broaden their appreciation of these interactions and to include investigations of the relationships between and among bacteria and their animal partners as we seek a better understanding of the natural world.

2013

Izvorni jezik: ENG

Current Contents: DA

Citation Index: DA

Kategorija: Znanstveni

Znanstvena područja: Biologija

Tiskani medij: da

URL Internet adrese: <http://www.pnas.org/content/110/9/3229>

Broj citata: Web of Science Core Collection: [166](#)

InspireHep: Nije moguće dohvatiti podatak o citiranosti rada

Scopus: [173](#)

Altmetric:



DOI: [10.1073/pnas.1218525110](https://doi.org/10.1073/pnas.1218525110)

Google Scholar: [Animals in a bacterial world : a new imperative for the life sciences](#)



# Institutional repositories

- [FULIR](#) – Full-text repository of the Ruđer Bošković Institute,
- [FAMENA PhD Collection](#),
- [FOI dllb](#),
- [School of Medicine Repository](#),
- [Faculty of Humanities and Social Sciences Digital Archive](#), all at University of Zagreb.
- [University of Zadar](#) and [University of Osijek](#)
- [National and University library](#) is maintaining two active repositories: Croatian Web Archive, a collection of selected material harvested from the Croatian Web space, and Digital Academic Repository, a collection of dissertations and thesis

# DABAR (*beaver*)



- DABAR – Digital Academic Archives and Repositories
- national infrastructure for digital repositories
- co-operation of Croatian libraries and University Computing Department SRCE at University of Zagreb
- DABAR we would enable librarians to focus at the content, not technological issues
- all types of materials: journal (magazine and newspaper) articles, book and book chapters, conference papers, presentations and posters presented at conferences, **graduation theses**, dissertations, research data, photographs, audio and video materials, etc.

# DABAR



- ▶ based on Islandora – Fedora Commons + Drupal CMS + Apache SOLR + ....
- ▶ This platform has been chosen for several reasons:
  - ▶ identity of the repository can be easily defined (design, logo...);
  - ▶ different formats are supported (graphics, video, audio, warc...);
  - ▶ Fedora (*Fedora Repository Software*) represents the best solution in regards of OAIS model;
  - ▶ common warehouse (Fedora) enables portal views upon the set of different institutional repositories (for example, multimedia portal), and better relationships among implemented repositories;
  - ▶ flexibility

D. Celjak, DABAR team leader, SRCE

# DABAR



- exchanging data with existing information systems, like *Information System of the Higher Education (ISVU)* using ISVU REST API (data about authors, mentors, commission members, thesis title, date of defence, document type, education level, etc.)
- persistent identifier URN:NBN (National bibliography number)
- AAI@EduHr authentication and authorization infrastructure



# Conclusions

- **long tradition** of OA in Croatia
- **infrastructure at national level** – efficient and effective
- missing **top-down** initiatives
- **wider support** of OA still needed
- **harmonization** with EU policies and rules
- **coordination** of existing activities
- more active role of **policy makers** needed
- partnership in the **international projects** like OpenAIRE, PASTEUR4OA, FOSTER, SERSCIDA etc. is very important



Thank you for your attention,  
comments and suggestions! 😊

➡ J. Stojanovski – [jadranka.stojanovski@irb.hr](mailto:jadranka.stojanovski@irb.hr)

