Citing biobanks

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Champion ESOF (EuroScience Open Forum) 2018,
Toulouse 9-14 July

UK Biobanking Showcase 2017, London, 18/10/2017

A multi-facet challenge

- **Citing a resource**
- **Getting a resource to be cited**
- **Using citation as a way to credit sharing**
- **Recognising and rewarding**
  - **The work of**
    - **Setting/maintaining a quality resource**
    - **Making a resource “sharable”**
  - **The sharing of biological samples and data.**

From BRIF to CoBRA to SHARC

- **BRIF**: Bioresource Research Impact Factor/
  An initiative Framework
- **CoBRA**: Citation of Bioresources in Research
  A guideline Articles
- **SHARC**: SHAring Reward & Credit

https://www.rd-alliance.org/group/short-presentation-sharing-rewards-and-credit-sharc-ig/case-statement/sharc-sharing-reward

An interest group

- **CODATA** international policy committee

A committee

Outline

- From wishful thinking to actual tools
  - Principles
  - Communities
  - Obstacles to implementation
  - Initiatives
  - Examples of tools
- Next steps and conclusion

What is biobanking science producing and needing?

- Publications
- Infrastructures
- Databases and datasets
- Collections of biological samples and data attached
- Specialised software and methods
- Bioinformatics tools
- …..

Among thoses which ones are measured, evaluated, valued?

Why are such resource sharing important….

Much biomedical/epidemiological research is based on using bioresources / approx. 300 million of tissue samples stored in the USA and 20 million of biological resources in Europe, for research and market use.

- Their access to all relevant researchers is essential
- Promoting their **sharing** is crucial, but does not mean « just » putting files on the web!
- It requires work…. Poorly recognised

There are today principles but few tools and ~ no incentive / tools to that.

and poorly done?

- BR not visible enough
- difficult to trace
- not acknowledged adequately
- difficult to assess their usage reliably

➢ **lack of a unique BR identification system to trace them precisely**

➢ **lack of standards for BR citation in the scientific literature**

➢ **lack of indicators describing efficient usage and management of BR**

A will and a maze

- *Data sharing statements and their promotion is a reality.*
- *Yet, in practice data sharing still meet many obstacles in several domains,*
  - *a major one being the lack of relevant and recognized rewarding mechanisms for the very specific efforts required.*

Complex process

- *Sharing data and physical resources includes very different steps, methods, contributions.*
  - *Data/samples of different origins/sources*
  - *Construction of a research resource*
  - *Establishment of its governance and sharing policy*
  - *Tools and follow up of the use of the resource.*

Some Initiatives

- **Force 11** : The FORCE 11 group (the Future Of Research Communications and E-scholarship) https://www.force11.org/ [Meeting **Berlin**, **October 25 – 27, 2017]**
- **P3G** : Public population project in genomics and society http://www.p3g.org/
- **G4GH**: Global Alliance for Health and Genomics genomicsandhealth.org/
- **RDA**: Research Data alliance [Plenary meeting **Barcelona April 5-7 2017**]

https://www.rd-alliance.org/

- **BRIF**: Bioresource Research Impact Factor Framework

http://www.bioshare.eu/content/bioresource-impact-factor

Tools for recognition

- Unique identifiers (for resources, [e.g. RRIDs, DOI] and contributors, [e.g. ORCID Open *Researcher* and Contributor *ID]*)
- Data and resources journals
- Data and bioresources citation rules
  - MTA and DTA with Citation rules
- Metrics (and their use/mis-use)
- Academic evaluation revisited !
  - The power of Open Access/ Open Data policies
- …

Objective: increase sharing
Purpose: recognition of the effort involved in establishing, maintaining and sharing resources
Challenge: how to overcome the feeling of loss that may prevail

Idea: Transforming a loss into an advantage.
« The more it is shared, the more it contributes to science, the more it is recognised »
Virtuous circle!

http://www.gen2phen.org/groups/brif-bio-resource-impact-factor

The BRIF initiative

Bioresource Research Impact Factor

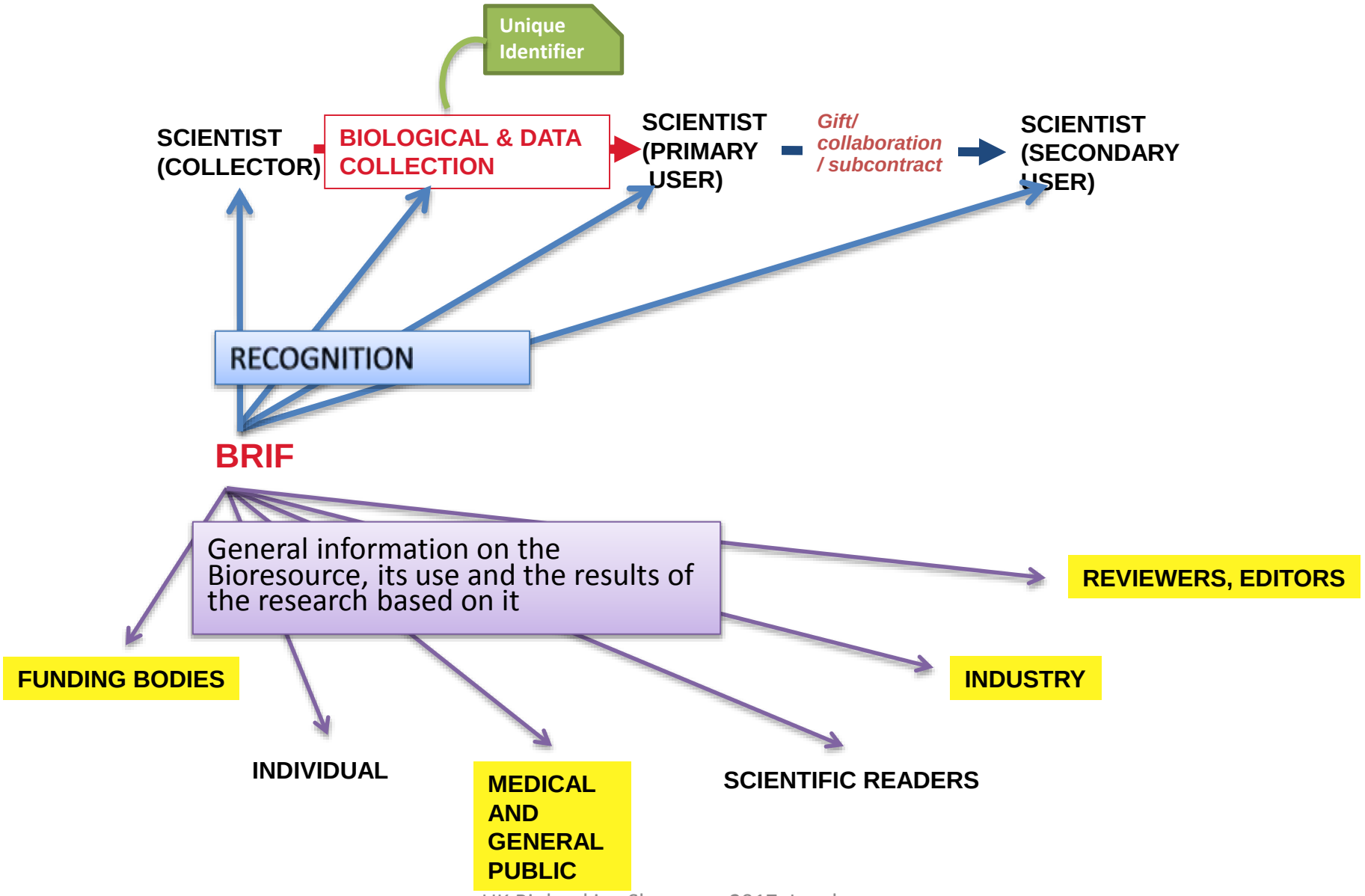
HOW?

By creating a set of adequate standardized tools:

•standards for citation / acknowledgement of bioresources in scientific articles in order to trace their use on the web

• BRIF indicator: a tool to establish frequency of BR use and evaluate their impact based on metrics and on the use of a unique digital resource identifier

BRIF in the complex world of bioresources



Working subgroups

‘BRIF & Digital Identifiers’

co-chaired by **G. A. Thorisson**, University of Leicester, UK and **P.A. Gourraud**, University of California SF, USA Pierreantoine.Gourraud@ucsf.edu

‘BRIF Parameters’

chaired by **B. Parodi**, National Inst. Cancer Res. Genoa, IT barbara.parodi@istge.it

‘BRIF in Access & Sharing Policies’

co-chaired by **E. Rial-Sebbag**, Inserm UMR1027, Toulouse, FR and **J. Harris,** Norwegian Institute of Public Health, Oslo, Norway emmanuelle.rial@univ-tlse3.fr, Jennifer.Harris@fhi.no

‘BRIF dissemination’

chaired by **L. Mabile**, Inserm UMR1027, Tlse, FR laurence.mabile@univ-tlse3.fr

‘BRIF and Journal Editors’

co-chaired by **A. Cambon-Thomsen**, Inserm UMR1027, Tlse, FR and **E. Bravo**, Istituto Superiore di Sanità, Rome, IT annie.cambon-thomsen@univ-tlse3.fr, elena.bravo@iss.it

The CoBRA (Citation of BioResources in journal Articles) guideline

Discussed at a Plenary RDA meeting

BoF session 5 apr 2017 14.00-15.30

How to give credit to scientists for their involvement in making data & samples available for sharing.

CoBRA : Citation of Bioresources in Research Articles. A milestone developed by the BRIF Journal Editors' subgroup

- Sensitizing editors and their associations about BR issues (targeted surveys)
- Dissemination of BRIF in international Science Edition and other Conferences
- Organize restricted workshops addressed to Journal editors and experts (Rome, June 21, 2013; Toulouse, Oct 9, 2016)
- Work out a guideline for citation of bioresources
- Launching an open access journal for describing bioresources with re-use potential

equator network

Enhancing the QUAlity and Transparency Of health Research

CoBRA

BMC Medicine

Home Library Toolkits Courses & eve

Home > Library > Reporting guideline > Developing a guideline to standardi

Search for reporting guidelines

Use your browser's Back button to return to your search results

Developing a guideline to standardize the in journal articles (CoBRA)

Reporting guideline provided for? (i.e. exactly what the authors state in the paper)	Citation of bioresources in journal articles
	CoBRA checklist (PDF)
Full bibliographic reference	Bravo E, Calzolari A, De Castro P, Mabile L, Napolitani F Thomsen A. Developing a guideline to standardize the ci

Bravo et al. BMC Medicine (2015) 13:33
DOI 10.1186/s12916-015-0266-y

Open Access

GUIDELINE

Developing a guideline to standardize the citation of bioresources in journal articles (CoBRA)

Elena Bravo[1*], Alessia Calzolari[1], Paola De Castro[1], Laurence Mabile[2], Federica Napolitani[1], Anna Maria Rossi[1] and Anne Cambon-Thomsen[2]

Abstract

Background: Many biomedical publications refer to data obtained from collections of biosamples. Sharing such bioresources (biological samples, data, and databases) is paramount for the present governance of research. Recognition of the effort involved in generating, maintaining, and sharing high quality bioresources is poorly organized, which does not encourage sharing. At publication level, the recognition of such resources is often neglected and/or highly heterogeneous. This is a true handicap for the traceability of bioresource use. The aim of this article is to propose, for the first time, a guideline for reporting bioresource use in research articles, named CoBRA: Citation of BioResources in journal Articles.

Methods: As standards for citing bioresources are still lacking, the members of the journal editors subgroup of th Bioresource Research Impact Factor (BRIF) initiative developed a standardized and appropriate citation scheme fo such resources by informing stakeholders about the subject and raising awareness among scientists and in scie editors' networks, mapping this topic among other relevant initiatives, promoting actions addressed to stakeho launching surveys, and organizing focused workshops.

Results: The European Association of Science Editors has adopted BRIF's suggestion to incorporate statement biobanks in the Methods section of their guidelines. The BRIF subgroup agreed upon a proposed citation sy each individual bioresource that is used to perform a study and that is mentioned in the Methods section s be cited as an individual "reference [BIORESOURCE]" according to a delineated format. The EQUATOR (Enha the QUAlity and Transparency Of health Research) network mentioned the proposed reporting guideline i

Guideline in EQUATOR

- The EQUATOR network : http://www.equator-network.org/
- Enhancing the QUAlity and Transparency Of health Research
  - Contains the major reporting guidelines internationally recognised
  - Editors frequently require such guidelines to be used in manuscripts
  - CoBRA was developed in contact with EQUATOR and now appear on this website

  http://www.equator-network.org/reporting-guidelines/cobra/

CoBRA check list

CoBRA short checklist for the citation of bioresources in scientific journal articles.	
Article text section	Guidance
Abstract	**Indicate whether the work has used one or more bioresources, and specify the number of bioresources if relevant.**
Introduction	**Indicate that the work has used one or more bioresources. Specify the type.**
Methods	**Report each individual bioresource used to perform the study:** **• by their name and other ID, if extant, and** **• by a single bibliographic reference.**
References	**Cite each bioresource used as follows:** ID/Bioresource Name (acronym if available)/organisation or network partnership/Number of access(es), Date of last access; [BIORESOURCE] **Specifications for ID: Unique ID can be DOI (Digital Object Identifier), catalogue number, or the name only.** **If the only ID is the name then add Town and Country.** **In the case of bioresources not used as a source of material for the study, but only referred to, follow the citation format:** **ID/Bioresource Name (acronym if available)/organisation or network partnership**

Format of the bioresource reference

- **Cite each bioresource used as follows:**
- **ID/Bioresource Name (acronym if available)/ organisation or network partnership/Number of access(es), Date of last access; [BIORESOURCE]**
- **Specifications for ID:**
  - **Unique ID can be DOI (Digital Object Identifier), catalogue number, or the name only.**
  - **If the only ID is the name then add Town and Country.**
- **In the case of bioresources not used as a source of material for the study, but only referred to, follow the citation format: ID/Bioresource Name (acronym if available)/organisation or network partnership**

Promoted by BBMRI-ERIC :

BBMRI-ERIC
Biobanking and
BioMolecular resources
Research Infrastructure

BRIF SERVICES: THE CoBRA GUIDELINE

What is the guideline about?

The BRIF (*Bioresource Research Impact Factor*) initiative is building a framework that enables set up indicators for the use of bioresources* and rewarding mechanisms. Generated as part of the BRIF initiative, the CoBRA (*Citing Of Bioresources in Research Articles*) guideline provides guidance for citing bioresources in academic literature: it specifies where and how to cite bioresources at each section of a research article.

BBMRI-ERIC encourages the systematic use of the CoBRA guideline by the biobank community and supports the inclusion in MTA/DTAs.

* Bioresources are defined as collections of biological samples with associated data (medical/epidemiological, social), databases independent of physical samples or other collection of biomolecular and bioinformatics research tools.

KEY ELEMENTS:

To report in scientific journal articles:

Abstract section: Indicate whether the work has used one or more bioresources, and specify the number of bioresources if relevant.

Introduction section: Indicate that the work has used one or more bioresources. Specify the type.

Methods section: Report each individual bioresource used to perform the study: By their name and other ID, if extant, and by a single bibliographic reference

References section:

Cite each bioresource used as a reference as follows:

ID / Bioresource Name (acronym if available) / organization or network partnership, membership (optional) / Number of access(es), Date of last access; [BIORESOURCE]

Cite each bioresources referred to (but not used) as a reference as follows:

ID / Bioresource Name (acronym if available) / organization or network partnership, membership (optional)

Who is this guideline for?

The guideline is intended for any researcher or professional reporting on a research work using bioresources or referring to bioresources in a scientific journal article.

How can I engage?

Use the CoBRA checklist when writing a scientific article!

Download the CoBRA guideline at

http://www.equator-network.org/reporting-guidelines/cobra/

Who to contact?

BRIF: Laurence.Mabile@univ-tlse3.fr

CoBRA: Elena Bravo, elena.bravo@iss.it

What is BBMRI-ERIC?

BBMRI-ERIC is a distributed research infrastructure of *biobanks* and *biomolecular resources*. For its Member States, it provides expertise and services on a non-economic basis and facilitates access to collections of partner biobanks and biomolecular resources. BBMRI-ERIC is established for an unlimited period of time.

Tutorial for CoBRA

- Tutorial on how to use CoBRA (prepared by the Institute of public health in Roma, under coordination by Elena Bravo)
  - educational video showing how to use the CoBRA guideline on Zenodo
- https://zenodo.org/record/55785
  - The video has a DOI to make it easily and uniquely citeable. The DOI is: 10.5281/zenodo.55785

Next: implementation of CoBRA
What actions?

- A guideline that is not implemented is of no use!
- What mechanisms: endorsement at various levels
  - Institutional (Universities, national institutes, infrastructures...)
  - Scientific (Scientific consortia, scientific and **professional societies**...)
  - Administrative : Inclusion of the reference to use in MTA
  - Educational : good practices taught to PhD students using bioresources
  - Editorial (instruction to authors, to reviewers; incentives to use EQUATOR's references guidelines…)

EDITORS IN THE FRONT LINE for CoBRA implementation

- Instruction to authors,
- Instructions to reviewers,
- Incentives to use EQUATOR's reference guidelines
- Training of Editors
- Including explicitly bioresources citation and the use of the corresponding guidelines in publication guidelines
- Organising a survey to find out easyness or pitfalls in using CoBRA, in order to improve

Pittfalls

- Number of references often limited : problem when many bioresources used
- References in supplementary material not explored by citation count algorithms
- No way to check if citation is done for the resources
- And be realistic : it is not research integrity that will play the major role but the open door to recognition of the resource and of those who make and maintain it
- CoBRA combined with marker paper is probably more powerful, but bioresources are not used to marker papers (reasons)

- **Launching an open access journal for describing bioresources with re-use potential**

Collaboration with Ubiquity Press

Launch of an open access data journal dedicated to the publication of description of bioresources

Aim:

- Increase the visibility of bioresources by offering the possibility of an open access "marker paper" , according to an established template of description

- Provides a bioresource with a DOI

http://openbioresources.metajnl.com

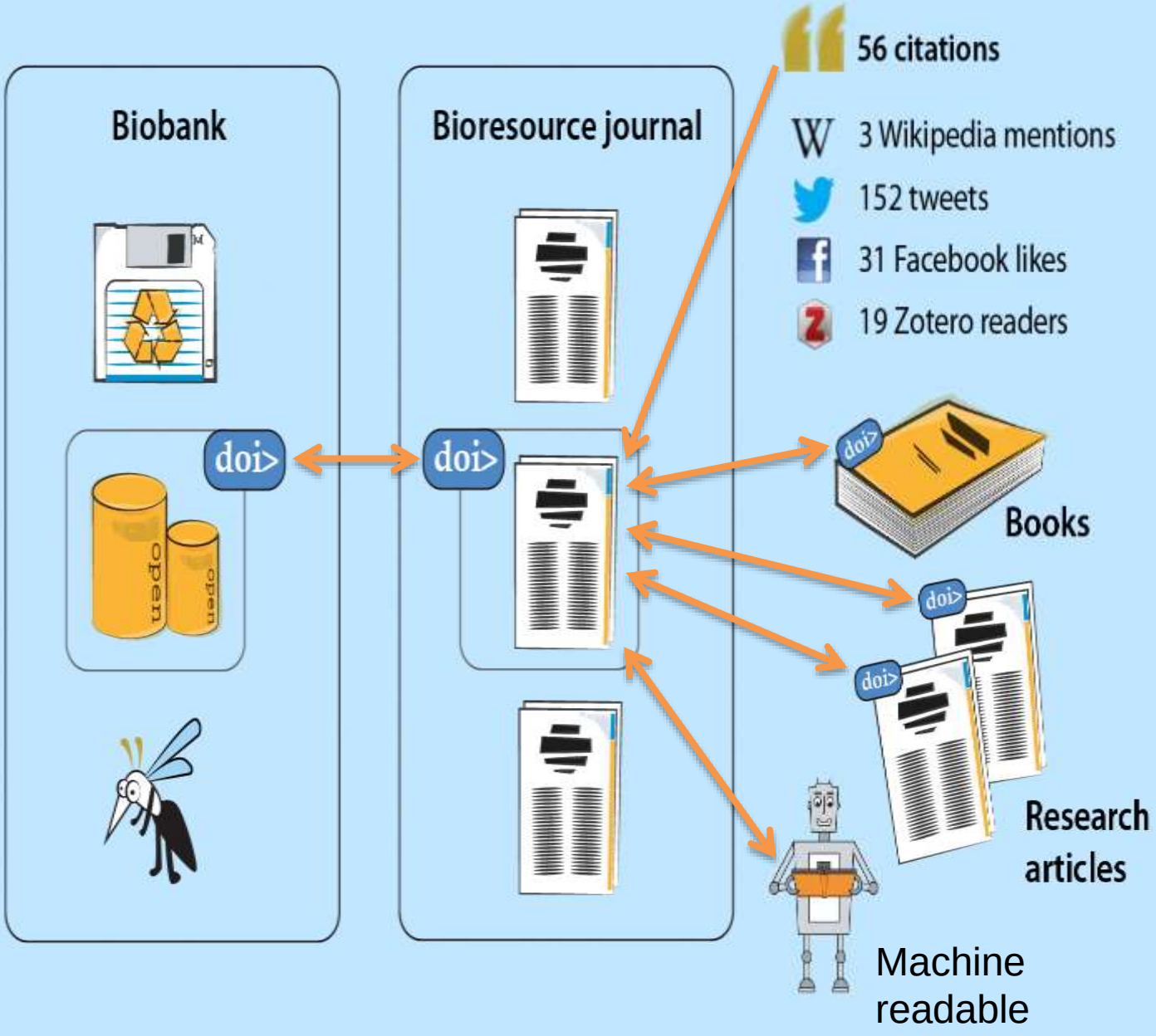
The *Open Journal of Bioresources (OJB)* features peer-reviewed short papers helping researchers to locate and cite bioresources with **high reuse potential.**

Making bioresources more openly discoverable has **enormous benefits** not only for the research community and the wider public, but for the producers of the bioresources as well.

Both the resources and the OJB papers are **citable** and this will be tracked to provide authors with **metrics on reuse and impact.**

How it works

- OJB Bioresource papers are:
  - Short and concise
  - Peer reviewed
  - Open Access only (CC BY)
  - Fully citable
- Paper structure:
  - Abstract
  - Bioresource overview
  - Methods
  - Bioresource description
  - Reuse potential


Biobank
Bioresource journal
doi
doi
open
open
56 citations
3 Wikipedia mentions
152 tweets
31 Facebook likes
19 Zotero readers
doi
Books
doi
doi
Research articles
Machine readable

Key points/conclusion

- To share or not to share: not anymore **the** question
- A key aspect is facilitating and rewarding sharing
- Barriers to sharing : complex
- A key element is to cite what has been shared
  - The recommendation CoBRA
  - Necessity to use it also in MTA and DTA
- Importance of international interdisciplinary policy oriented consortia
- This rationalisation and standardisation of bioresource citation is part of a chain of public policies for the recognition of the various ways of contributing to research and to society

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http://listes.univ-tlse3.fr/wws/subscribe/brif.info

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— SHARING SCIENCE: TOWARDS NEW HORIZONS —

www.esof.eu

Consider discussing this at ESOF 2018 (EuroScience Open Forum)

- Toulouse, France 9-14 July 2018
- http://www.esof.eu/en/
- Still some calls open
  - For sessions, deadline 31 October 2017
  - For posters (to open 23 October until 20 December
- http://www.esof.eu/en/about/programme/call-for-proposals.html

Themes and cross-cutting themes of possible interest

- Health in our societies
- Science policy and transformation of research practice
- The use/mis-use of research and scientific advice
- Sharing knowledge
- A digital world
- Risk and safety
- Inequalities
- Gender issues
- Ethics