

# The BioSharing Registry: connecting data standards, policies and databases in the life sciences

5th UK Ontology Network Meeting, April 14th 2016

Allyson L. Lister

Alejandra Gonzalez-Beltran

Massimiliano Izzo

Eamonn Maguire

Peter McQuilton

Philippe Rocca-Serra

Milo Thurston

Susanna-Assunta Sansone

Run at  is also an  contribution to  so operating as a WG in  

BioSharing  
Community

There are 45 communities





## Developer: seeking to make your resource more findable?

Register or update your standard and/or database in our registries; make them more discoverable to other users and get credit for it...[\[read more\]](#)



## Researcher/curator: looking for guidance?

Find the appropriate standard and database for your dataset. See journal requirements and journal and funding agency data policies...[\[read more\]](#)



## Funder: developing data policies?

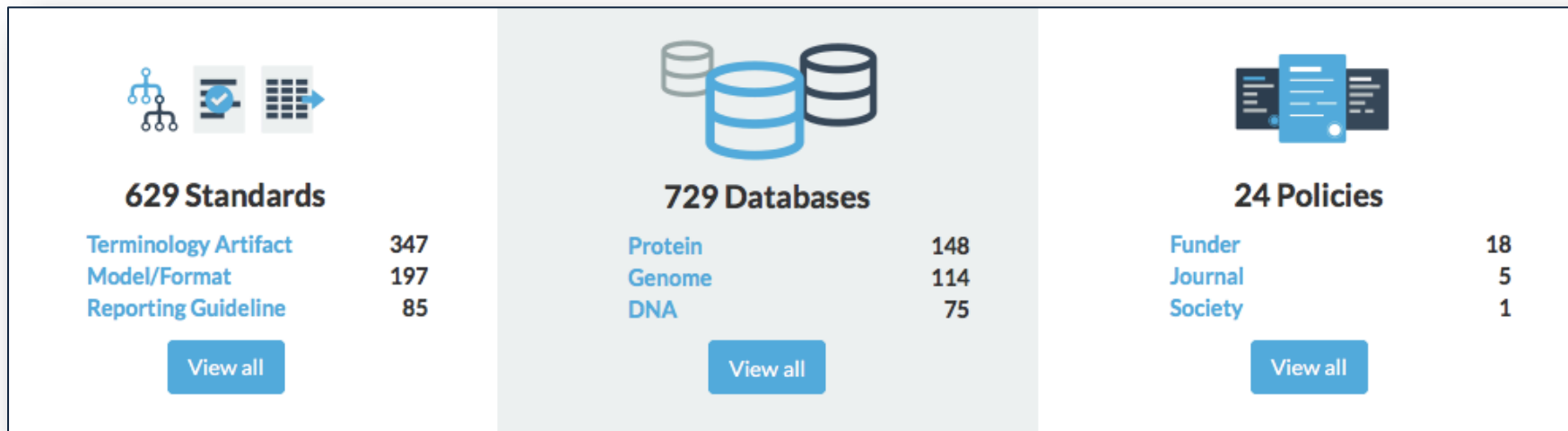
Refine your policy discovering which standards and databases are inter-related, more used and mature, and if are funded by you...[\[read more\]](#)



## Journal editor/librarian: creating guidelines?

Create your view on an inter-related set of standards and/or databases, a simple way to complement your data guidelines and assist your users...[\[read more\]](#)

1,400 records and growing



## Mapping the landscape of 'standards' in the life sciences

Run at  is also an  contribution to  so operating as a WG in  

  
There are 45 communities



# Tracking evolution, e.g. deprecations and substitutions

DEPRECATED

biosharing.org  
Information Resources

View as Grid | View as Table

9 records in view

Best Match | Sort Descending | Sort Ascending

No Publication | Has Publication

No Maintainer | Has Maintainer

Deprecated | Current

Closed Access | Restricted Access | Open Access

**Bilateria anatomy**  
TERMINOLOGY ARTIFACT  
DEPRECATED

Systems: 1  
Publications: 0  
In Collections: 0

No taxa defined.

2 Data types, including:  
ANATOMY, BILATERA

**Platyneris Developmental Stage**  
TERMINOLOGY ARTIFACT  
DEPRECATED

Systems: 0  
Publications: 0  
In Collections: 0

No taxa defined.

3 Data types, including:  
LIFE CYCLE, PLATYNERIS, LIFE CYCLE STAGE

**Amphibian gross Anatomy Ontology**  
TERMINOLOGY ARTIFACT  
DEPRECATED

Systems: 0  
Publications: 1  
In Collections: 0

No taxa defined.

2 Data types, including:  
AMPHIBIA, ANATOMY

**Dendritic cell**  
TERMINOLOGY ARTIFACT  
DEPRECATED

Systems: 0  
Publications: 0  
In Collections: 0

No taxa defined.

4 Data types, including:  
DENDRITIC CELL, ANATOMY, FUNCTION, MORPHOLOGY

This record was deprecated on April 8, 2015 for the following reason(s):  
This resource is obsolete, and has been subsumed (together with mzXML) into mzML. Please use mzML instead (<https://www.biosharing.org/bsg-000112>). For more information, see <http://www.psdev.info/groups/mass-spectrometry>

**mzData**  
MODEL AND FORMAT

**General Information**

mzData is an XML format for representing mass spectrometry data in such a way as to completely describe the instrumental aspects of the experiment. This format is deprecated and has been superseded by mzML.

This record is replaced by:  
mz Markup Language

Record added: Feb. 23, 2015, 1:23 p.m.  
Last updated: April 8, 2015, 7:24 p.m.

**mz Markup Language**  
MODEL/FORMAT

Systems: 5  
Publications: 1  
In Collections: 2

No taxa defined.

5 Data types, including:  
MASS SPECTRUM, MASS SPECTROMETRY ASSAY, PROTEIN

**mzData**  
MODEL AND FORMAT  
DEPRECATED


Systems: 0  
Publications: 1

# Cross-linking standards to standards and databases

We link (descriptions of) standards to related standards and databases, implementing them

biosharing.org  
Information Resources

## Standard Record


  
**MIAME Notation in Markup Language**  
MODEL/FORMAT

**Systems** 3  
**Publications** 0  
**In Collections** 2

No taxa defined.

**4 Data types, including:**

REPORT EXPERIMENT  
FUNCTIONAL GENOMICS FILE



## Standard Record

  
**MIAME**  
REPORTING GUIDELINE

**Systems** 3  
**Publications** 1  
**In Collections** 1

**3 Taxa types, including:**

BACTERIA ARCHAEA EUKARYOTA


**7 Data types, including:**

GENOME DNA DNA MICROARRAY  
TRANSCRIPTOME RNA

Model/format formalizing reporting guideline -->

<-- Reporting guideline used by model/format

## Database Record

  
**Gene Expression Omnibus**

**Standards** 4  
**Publications** 1  
**In Collections** 6

**1 Taxa types, including:**

ALL

**3 Data types, including:**

GENE EXPRESSION LIFE SCIENCE GENOME

SCIENTIFIC DATA Scientific Data

A biologically-centered subset of Scientific Data's recommended repositories and standards. Please see the Scientific Data website for the full list of repositories and standards across all domains. Scientific Data is an open access, peer-reviewed data journal from the Nature Publishing Group. This Recommendation is maintained by: ScientificData Record updated: March 24, 2016, 10:35 a.m. by The BioSharing Team.

Homepage Reference

View as Grid View as Table

Sort by Best Match

Recommended Records Recommended

Associated Publication? No Publication Has Publication

Claimed? No Maintainer Has Maintainer

Record Status Deprecated Current

Standard Type Terminology Artifact 7 Reporting Guideline 4

Showing records 1 - 50 of 71.

« 1 2 »

ArrayExpress DATABASE  
6 Standards  
2 Publications  
1 In Collections  
6 Recommended  
1 Taxa types, including: All

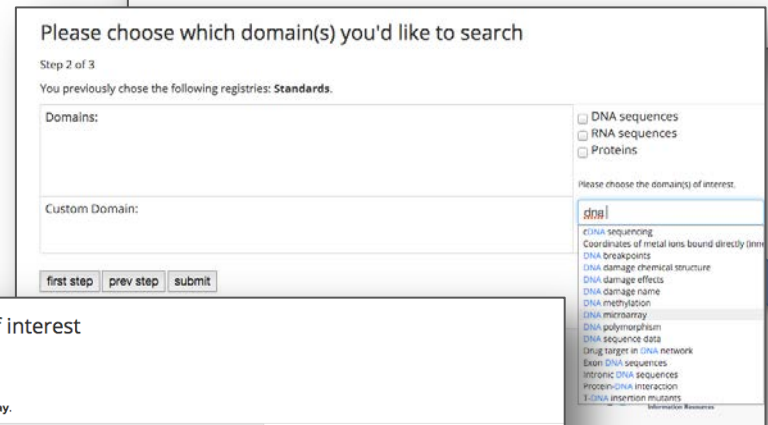
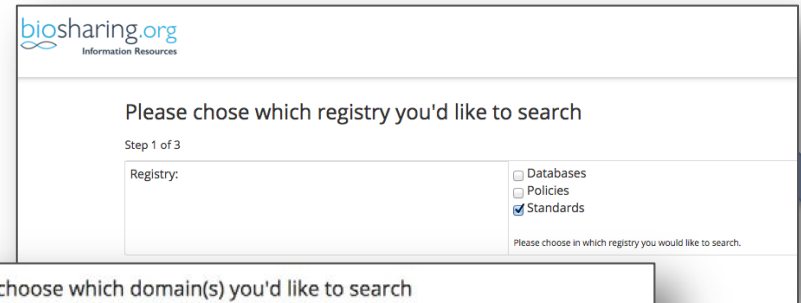
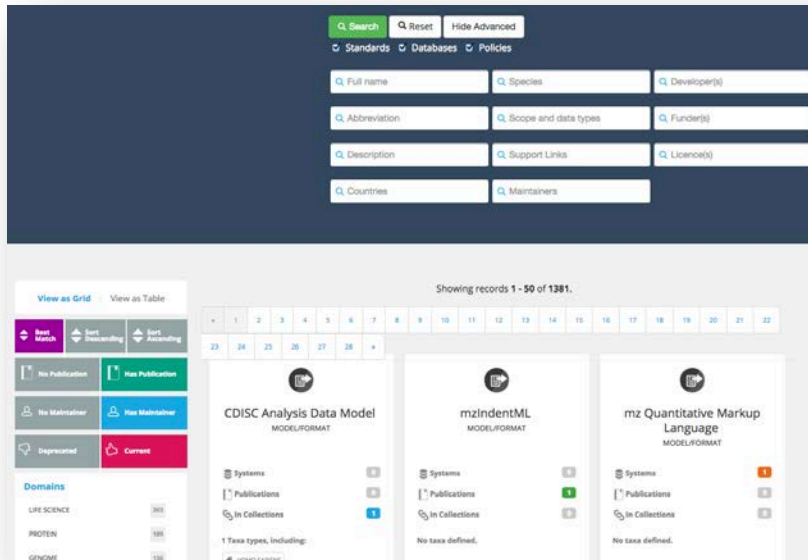
BAO BioAssay Ontology TERMINOLOGY ARTIFACT  
0 Implementing databases  
0 Publications  
1 In Collections  
1 Recommended  
No taxa defined.

BioGRID Biological General Repository for Interaction Datasets DATABASE  
3 Standards  
1 Publications  
3 In Collections  
2 Recommended  
3 Taxa types, including: Schizosaccharomyces Pombe Arabidopsis Thaliana

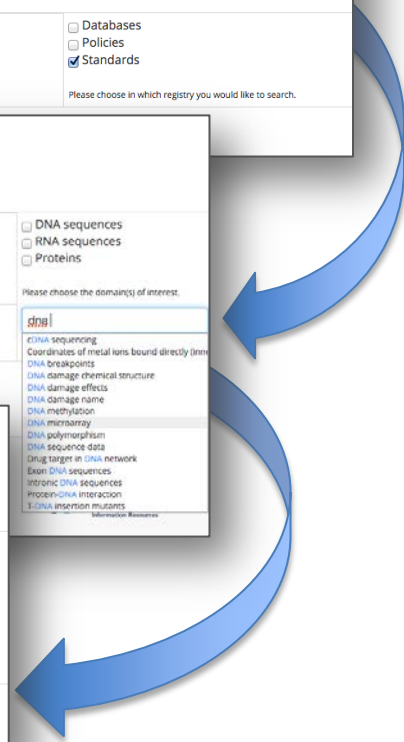
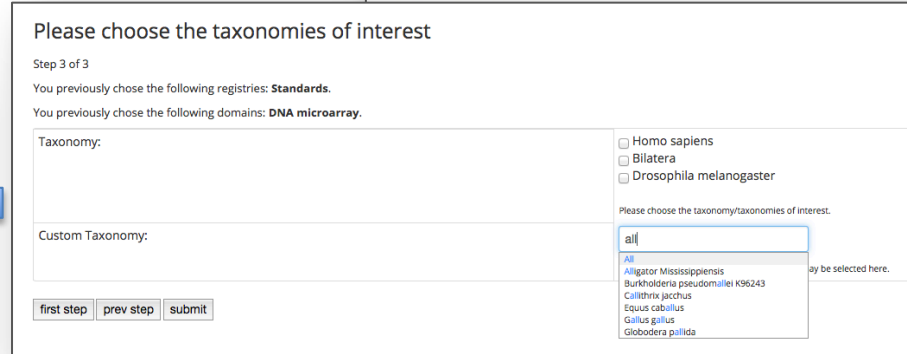
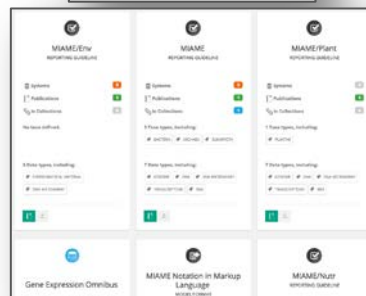
# From simple and advance search interfaces to....

## ....the recommender system

Powered by curated descriptions of each standard and database records, and their relations;



The RECOMMENDER has spoken!



# New *Article* format for Scientific Data

“The **Article** is a flexible format for presenting original reports on systems or techniques that clearly advance data sharing and reuse. This includes research on sharing, managing and processing scientific research data, as well as articles describing data repositories, standards and **ontologies**. Articles may also present sociological research on data sharing habits or perceptions, or the effectiveness of sharing policies.”

*7 April 2016, Scientific Data*

<http://blogs.nature.com/scientificdata/2016/04/07/scientific-data-to-publish-a-wider-range-of-research-advancing-data-sharing-and-reuse>



# Thank you!

- Is your ontology represented in BioSharing?
  - Look for it at <https://biosharing.org/>
  - Claim the record to help us curate it
- Add an ontology record in BioSharing
  - <https://biosharing.org/new/standard>