Accelerating your research by utilizing research data

Data Citation Index on the Web of Science

Eniko Toth Szasz, eniko.szasz@clarivate.com
There is an ever-increasing need for access to digital research data, with demand coming from both researchers and funding agencies. There are numerous Data Repositories but they vary in their structure and their search capabilities. So there is the need for a standard search tool.
One of the key blocks in the Open Science model is Open Data

OPEN DATA must be:

- Findable
- Accessible
- Interoperable
- Re-usable

The Data Citation Index is assisting researchers with each of these
Data Citation Index

The Data Citation Index makes it easy to bring research data into your workflow.

- **Save time** spent looking for data by searching across content from **over 440** repositories in one place.
- **Track citations to the data and software** you have deposited.
- **12M+ million data sets indexed**
- **Provides data studies from 1900-present**

- **Promote the value and importance of sharing data** & following the best data management practices.
- **Provide a trusted reference** for faculty unsure of where to deposit data.

Master Repository List

*Statistics as of January 1st 2022*
Repository Selection & Evaluation

**Publishing Standards**
- Persistence and Stability
- Funding Statements
- Peer Review
- Age of material
- Metadata & links to the literature

**Editorial Content**
- Emerging topics
- Active fields

**International Diversity**
- Among Authors, Editors, Data Producers & Deposited Data.

**Data Citations**
- References that cite the data
- References cited by the data

The Repository Selection Process explained
Data Citation Index

Document types in DCI

We evaluate and select the best data repositories for content, persistence and stability, and searchability. Data that we index is organized into three document types to enhance searchability and discoverability:

• **Repository**: This resource consists of data studies and data sets and provides access to the data.

  • **Data Study**: This is a description of the study or experiment with the associated data used in the study. Includes serial or longitudinal studies over time.

    • **Data Set**: A single or coherent set of data, or a data file, provided by the repository as part of a collection, data study, or experiment.

    • **Software**: A computer program or package in source code or compiled form, which can be installed on another machine and used to support & analyze research.
Data Citation Index – How do we curate it?

The citation information is gathered from three main sources:

- Citations from Repository curation (Varied)
- Formal data citations in literature bibliographies (25%)
- Informal data citations in literature full text (75%)

Not all repositories provide citation data. The informal citations in literature are gathered from life science databank accession numbers.
### Type of data by discipline

#### ART & HUMANITIES
- CULTURAL HERITAGE
- LANGUAGE CORPUS
- IMAGE COLLECTIONS
- RECORDINGS

#### SOCIAL SCIENCES
- POLL DATA
- ECONOMIC STATISTICS
- LONGITUDINAL DATA
- NATIONAL CENSUS
- PUBLIC OPINION SURVEYS

#### SCIENCE & TECHNOLOGY
- MAPS
- ALGORITHMS
- GENOMICS
- SKY SURVEYS
- ASTROPHYSICS
- REMOTE SENSING
- MUSEUM SPECIMENS

### Active Repository by Continent

- **North America**
- **Europe**
- **Australasia**
- **Asia**
- **Africa**
- **Worldwide**

### Active Repository by Discipline

- **Physical Sciences**
- **Life Sciences**
- **Multi-discipline**
- **Arts & Humanities**
- **Social Sciences**
- **Technology**
Data Citation Index

Results List

Search Results within the Data Citation Index present the powerful Web of Science options for exploring a body of information.
The number of citations in DCI are gathered from repositories where they provide them, from correctly cited references lists in publications and some can be mined from incorrect citations in the text.
Data Citation Index

How to cite research data?

Clarivate recommends citing this resource as:
Kuang, Xia; Zhou, Shuang; Guo, Welling; Wang, Zhenjle; Sun, Yanhui; Liu, Hongzhao (2017): SS-31 peptide enables mitochondrial targeting drug delivery: a promising therapeutic alteration to prevent hair cell damage from aminoglycosides. Figshare.
http://dx.doi.org/10.6084/m9.figshare.5678797

DCI provides the ‘DataCite’ citation guidelines (https://www.datacite.org)
Data Citation Index

Integrating Data Discovery in WoS Search Results

- Exposing research data in search results puts millions of data sets and data studies directly into your discovery workflow.
- Related data supports Open Science by bringing more transparency to the research process.
- Available only for Data Citation Index subscribers

The Associated Data filter is available in all databases and each database (only exception is Derwent Innovations Index).

Refine results for Associated Data to surface articles that mention more specific data sets or studies indexed in Data Citation Index.
Data Citation Index

Value

**DISCOVERY**
- Locate research data for a topic directly in DCI or via the WOS literature
- Data icon and WOS filter allows identification of articles which are associated with a DCI data set
- Use the links in DCI to access and download the full data set from source

**CITATION/DATA USE**
- Identify “hot” data sets
- Track the use of data as they are cited
- Use provided data citation format to cite data

**DETERMINE WHERE TO DEPOSIT RESEARCH DATA**
- Which are the most cited locations
- Where are data from a particular domain deposited
- Where are data from a particular journal deposited

**REPRODUCIBILITY**
- Obtain the data sets used/created by research to allow evaluation and reproducibility
Data Citation Index

How it helps

**RESEARCHERS**
- Save time looking for data by searching across repositories in one place
- Reach more people, have greater impact
- Track and get recognition for shared data
- Avoid duplication of efforts

**LIBRARIANS**
- Promote the value and the importance of sharing data
- Provide a trusted reference for faculty of where to deposit their data
- Preserve data for future researchers
- Validate attribution of single datasets by researchers of institute

**FUNDING MANAGERS**
- Assess compliance with grant requirements
- Discover repositories available in a specific subject area
More resources

• Video “Data Citation Index – Getting Started”
  https://clarivate.com/webofsciegengroup/support/wos/dci//#

• Recommended practices to promote scholarly data citation and tracking
Thank you!

Eniko Toth Szasz
Eniko.szasz@clarivate.com