



Accelerating your research by utilizing research data

Data Citation Index on the Web of Science

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Data Citation Index

Why is it needed?

There is an ever-increasing need for access to digital research data, with demand coming from both researchers and funding agencies.

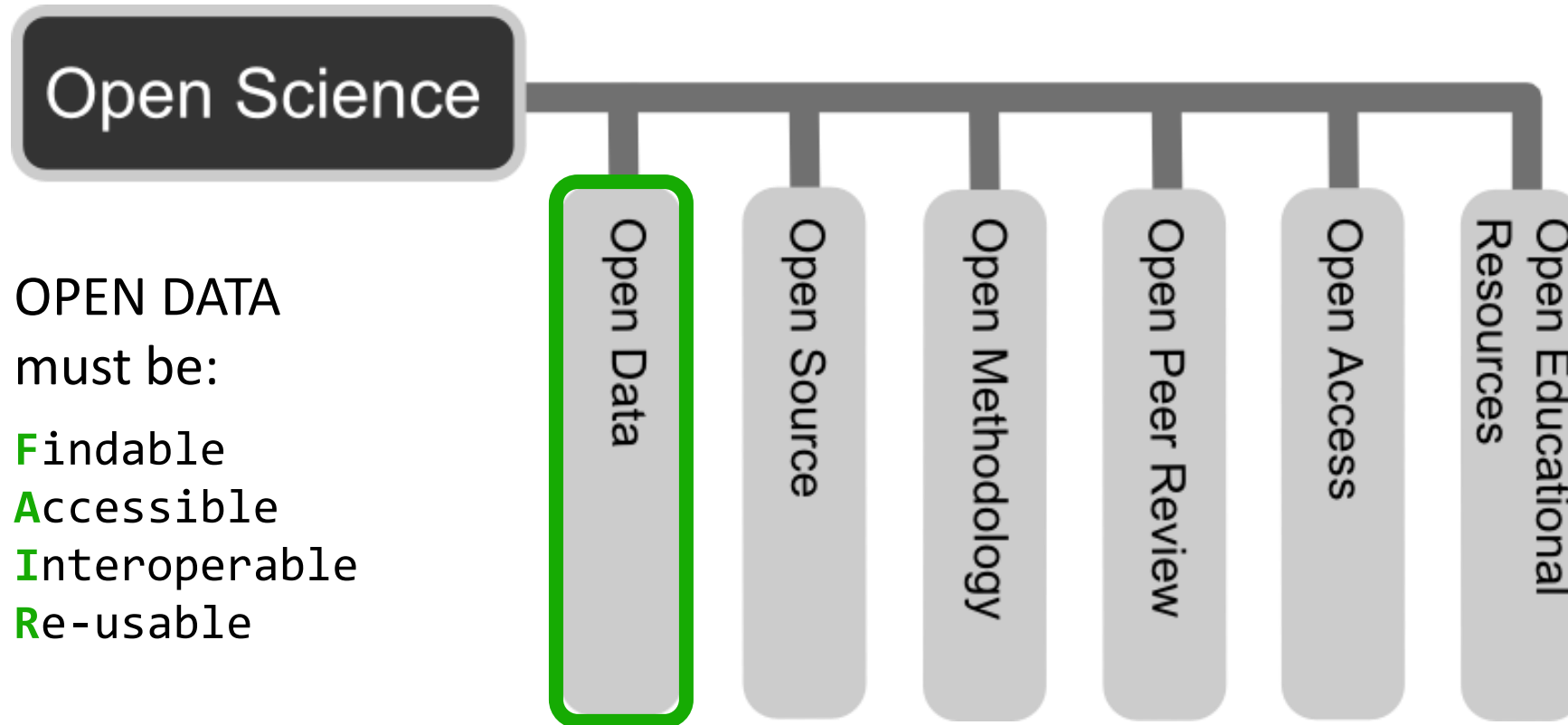


There are numerous Data Repositories but they vary in their structure and their search capabilities. So there is the need for a standard search tool.

Data Citation Index

Promoting Open Science

One of the key blocks in the Open Science model is Open Data



The Data Citation Index is assisting researchers with each of these

443
repositories

12M+
datasets

1.4M
Data studies

Data Citation Index

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



Researchers

- **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**



Librarians

- **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](#)



Genome Portal

DRUGBANK



PANGAEA.

Data Publisher for Earth & Environmental Science



ADA AUSTRALIAN
DATA ARCHIVE

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.

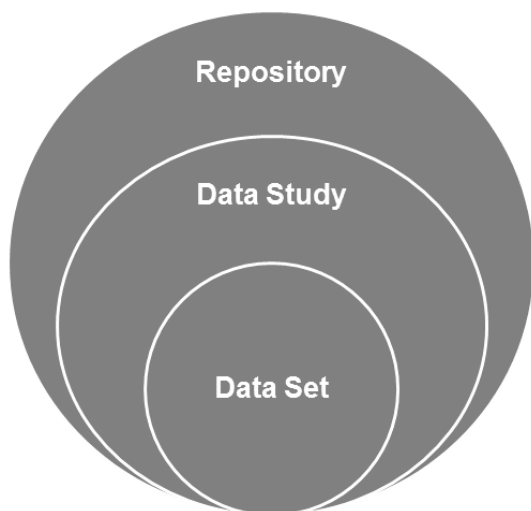
Data Citations

References that cite the data
References cited by the data

The Repository Selection Process explained

Data Citation Index

Document types in DCI

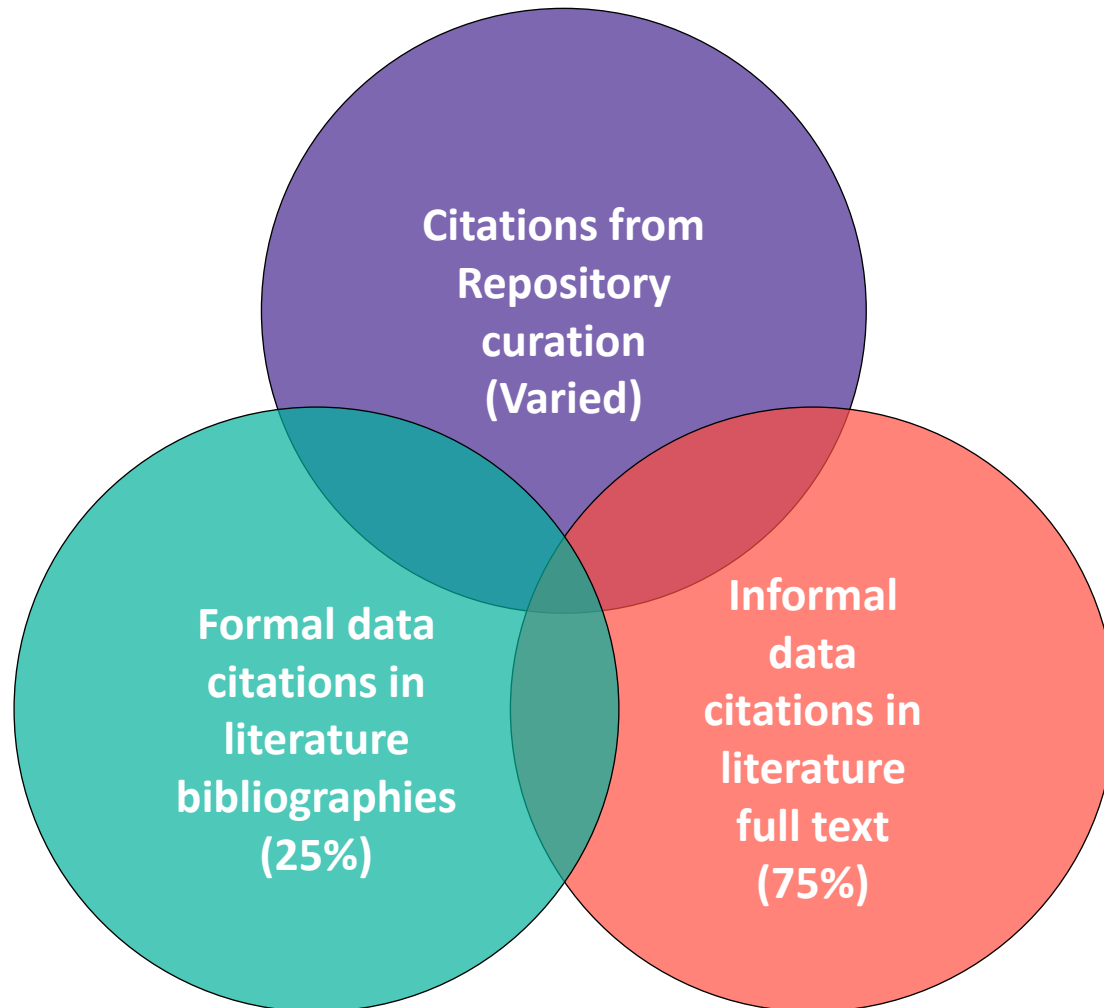


We evaluate and select the best data repositories for content, persistence and stability, and searchability. Data that we index is organized into three document types to enhance searchability and discoverability:

- **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



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

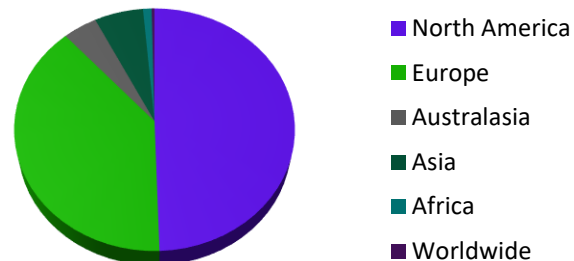
Type of data by discipline

ART & HUMANITIES
CULTURAL HERITAGE
LANGUAGE CORPUS
IMAGE COLLECTIONS
RECORDINGS

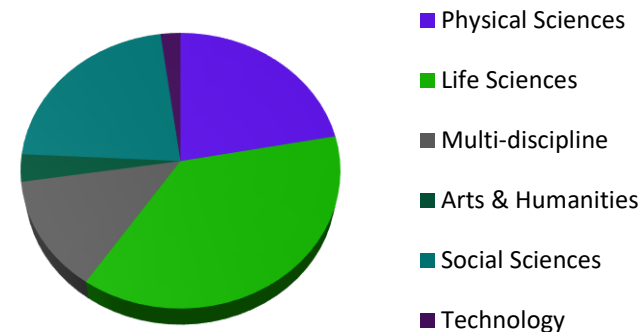
SOCIAL SCIENCES
POLL DATA
ECONOMIC STATISTICS
LONGITUDINAL DATA
NATIONAL CENSUS
PUBLIC OPINION SURVEYS

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

Active Repository by Continent



Active Repository by Discipline



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.

16,286 results from Data Citation Index for:

Q zebrafish (Topic) [Analyze Results](#) [Create Alert](#)

[Copy query link](#)

Publications You may also like...

Results

Search within results for...

0/16,286 [Add To Marked List](#) [Export](#) Sort by: Citations: highest first 1 of 326

☐ 1 SS-31 peptide enables mitochondrial targeting drug delivery: a promising therapeutic alteration to prevent hair cell damage from aminoglycosides 18 Citations
[Kuang, Xiao; Zhou, Shuang; \(...\); Liu, Hongzhuo](#)
2017 | Figshare | Data set
Aminoglycoside-induced hearing loss stems from damage or loss of mechanosensory hair cells in the inner ear. Intrinsic mitochondrial cell death pathway plays a key role in that cellular dysfunction for which no proven effective therapies against oto-toxicities exist. Therefore, the aim of the p ... [Show more](#)
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☐ 2 5' modifications improve potency and efficacy of DNA donors for precision genome editing 8 Citations
[Ghanta, Krishna; Chen, Zexiang; \(...\); Mello, Craig](#)
2021 | Dryad | Data set
Nuclease-directed genome editing is a powerful tool for investigating physiology and has great promise as a therapeutic approach to correct mutations that cause disease. In its most precise form, genome editing can use cellular homology-directed repair (HDR) pathways to insert information ... [Show more](#)
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Publication Years

<input type="checkbox"/> 2022	6
<input type="checkbox"/> 2021	1,762
<input type="checkbox"/> 2020	1,595
<input type="checkbox"/> 2019	1,582
<input type="checkbox"/> 2018	864

[See all >](#)

Content Type

<input type="checkbox"/> Data Set	11,599
<input type="checkbox"/> Data Study	4,577
<input type="checkbox"/> Software	110

Web of Science Categories

Identify cited research data in Web of Science

Access the DCI record

Effect of light on gene expression in the zebrafish pineal gland

Group Author: Yoav Gothilf Lab¹
European Nucleotide Archive
Source URL: <http://www.ebi.ac.uk/ena/data/view/PRJNA231567>
Published: 2014
Indexed: 2016-03-16
Content Type: Data study
Data Type: nucleotide sequencing information

Abstract
Microarray data allowed detection of genes that are induced by light in the zebrafish pineal gland Overall design: Adult (0.5-1.5 years old) transgenic zebrafish, Tg(aanat2:EGFP)Y8, which express enhanced green fluorescent protein (EGFP) in the pineal gland under the control of the aanat2 regulatory regions, were used. Fish were raised under 12-hr light:12-hr dark (LD) cycles, in a temperature controlled room. Fish were transferred to constant darkness (DD) at the end of the day prior to the experiment. Fish were exposed to a 1-hr light pulse (light intensity of 12 W/m2) prior to sampling (light treatment) or kept under constant darkness for control (dark treatment). The tissues were collected from light- and dark-treated fish at 6 time points with 4-hr intervals throughout one daily cycle, corresponding to CT2, 6, 10, 14, and 22. Fish were anesthetized in 1.5 mM Tricaine (Sigma), sacrificed by decapitation, and pineal glands were removed under a fluorescent dissecting microscope. Pools of 12 pineal glands were prepared at each condition and total RNA was extracted using the RNeasy Lipid Tissue Mini Kit (QIAGEN), according to the manufacturer's instructions.



The light-induced transcriptome of the zebrafish pineal gland reveals complex regulation of the circadian clockwork by light

Associated Data

by: Ben-Moshe, Z (Ben-Moshe, Zohar)¹; Alon, S (Alon, Shohar)^{1, 2}; Mracek, P (Mracek, Philipp)³; Faigenbloom, L (Faigenbloom, Lior)¹; Tovin, A (Tovin, Adi)¹; Vatin, GD (Vatin, Gad D.)¹; Eisenberg, E (Eisenberg, Eli)^{2, 4}; Foulkes, NS (Foulkes, Nicholas S.)³; Gothilf, Y (Gothilf, Yoav)^{1, 2}
View Web of Science ResearcherID and ORCID (provided by Clarivate)

NUCLEIC ACIDS RESEARCH
Volume: 42 Issue: 6 Page: 3750-3767
DOI: 10.1093/nar/gkt1359
Published: APR 2014
Indexed: 2014-05-21
Document Type: Article

Abstract
Light constitutes a primary signal whereby endogenous circadian clocks are synchronized ('entrained') with the day/night cycle. The molecular mechanisms underlying this vital process are known to require gene activation, yet are incompletely understood. Here, the light-induced transcriptome in the zebrafish central clock organ, the pineal gland, was characterized by messenger RNA (mRNA) sequencing (mRNA-seq) and microarray analyses, resulting in the identification of multiple light-induced mRNAs. Interestingly, a considerable portion of the molecular clock (14 genes) is light-induced in the pineal gland. Four of these genes, encoding the transcription factors dec1, reverbb1, e4bp4-5 and e4bp4-6, differentially affected clock- and light-regulated promoter activation, suggesting that light-input is conveyed to the core clock machinery via diverse mechanisms. Moreover, we show that dec1, as well as the core clock gene per2, is essential for light-entrainment of rhythmic locomotor activity in zebrafish larvae. Additionally, we used microRNA (miRNA) sequencing (miR-seq) and identified pineal-enhanced and light-induced miRNAs. One such miRNA, miR-183, is shown to downregulate e4bp4-6 mRNA through a 3'UTR target site, and importantly, to regulate the rhythmic mRNA levels of aanat2, the key enzyme in melatonin synthesis. Together, this genome-wide approach and functional characterization of light-induced factors indicate a multi-level regulation of the circadian clockwork by light.

Keywords
Keywords Plus: HYPOXIA-INDUCIBLE FACTOR-1-ALPHA; N-ACETYLTRANSFERASE; MOLECULAR ANALYSIS; GENE-EXPRESSION; RNA-SEQ; MICRORNAS; IDENTIFICATION; ACTIVATION; PATHWAYS; SYSTEM

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▼ ² Tel Aviv Univ, Sagol Sch Neurosci, IL-69978 Tel Aviv, Israel

Associated Data 1 (from Data Citation Index)

Repository	Type	Link to Repository
Effect of light on gene expression in the zebrafish pineal gland	Data study	Link to External Source

Associated Data Table

View All Associated Data

Funding

Funding agency
Israel Science Foundation
US-Israel Binational Science Foundation

Citation Network

In Web of Science Core Collection

48 Citations

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49 Times Cited in All Databases
69 Cited References
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BRAIN RESEARCH
Johnston, JD; Bashforth, R; Hazlerigg, DG; et al.
Rhythmic melatonin secretion does not correlate with the expression of arylalkylamine N-acetyltransferase, inducible cyclic amp early repressor, period1 or cryptochrome1 mRNA in the sheep pineal
NEUROSCIENCE

WAKABAYASHI, H; SHIMADA, K; SATOH, T; EFFECTS OF DIAZEPAM ADMINISTRATION ON MELATONIN SYNTHESIS IN THE RAT PINEAL-GLAND INVIVO
CHEMICAL & PHARMACEUTICAL BULLETIN
monneaux, V; Kienlen-Campard, P; Pevet, P; al.

Direct access to the research data

European Nucleotide Archive

PRJNA231567

View

Examples: Taxon:0606, BIN:000005, PRJ:0402

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About

Support

No public data has been made available in this project yet. Awaiting submission and/or validation of data.

Project: PRJNA231567

Microarray data allowed detection of genes that are induced by light in the zebrafish pineal gland Overall design: Adult (0.5-1.5 years old) transgenic zebrafish, Tg(aanat2:EGFP)Y8, which express enhanced green fluorescent protein (EGFP) in the pineal gland under the control of the aanat2 regulatory regions, were used. Fish were raised under 12-hr light:12-hr dark (LD) cycles, in a temperature controlled room. Fish were transferred to constant darkness (DD) at the end of the day prior to the experiment. Fish were exposed to a 1-hr light pulse (light intensity of 12 W/m2) prior to sampling (light treatment) or kept under constant darkness for control (dark treatment). The tissues were collected from light- and dark-treated fish at 6 time points with 4-hr intervals throughout one daily cycle, corresponding to CT2, 6, 10, 14, 18 and 22. Fish were anesthetized in 1.5 mM Tricaine (Sigma), sacrificed by decapitation, and pineal glands were removed under a fluorescent dissecting microscope. Pools of 12 pineal glands were prepared at each condition and total RNA was extracted using the RNeasy Lipid Tissue Mini Kit (QIAGEN), according to the manufacturer's instructions.

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Data Citation Index

Explore data in the citation network

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SS-31 peptide enables mitochondrial targeting drug delivery: a promising therapeutic alteration to prevent hair cell damage from aminoglycosides

By: Kuang, Xiao; Zhou, Shuang; Guo, Weiling; Wang, Zhenjie; Sun, Yanhui; Liu, Hongzhuo
Figshare
DOI: [10.6084/m9.figshare.5678797](https://doi.org/10.6084/m9.figshare.5678797)
Published: 2017
Indexed: 2022-02-11
Content Type: Data set

sory hair cells in the inner ear. Intrinsic mitochondrial cell death pathway plays a key role in that exist. Therefore, the aim of the present study was to develop a new mitochondrial targeting drug ularly, SS-31 peptide-conjugated geranylgeranylacetone (GGA) loaded poly(lactic-co-glycolic acid) tion method. The **zebrafish** lateral line sensory system was used as an in vivo evaluating platform nificantly reduced the activity of mechanoelectrical transduction (MET) channel and gentamicin icles showed mitochondrial specific accumulation in hair cells when compared with unconjugated ced mitochondrial membrane potential (MMP, DeltaPsi_m) and then returned to a steady-state,

indicating their effect on the respiratory chain complexes in mitochondria. GGA loaded SS-31 conjugated nanoparticles demonstrated the most favorable hair cells survivals against gentamicin when compared with unconjugated groups whereas blank formulations failed to exhibit potency, indicating that the efficiency was attributed to drug delivery of GGA. These results suggest that our constructed mitochondria-targeting PLGA based DDS have potential application in protecting hair cells from ototoxic agents. Copyright: CC BY 4.0

Keywords
Author Keywords: Biophysics; Biochemistry; Space Science; Medicine; Cell Biology; Pharmacology; Biotechnology; Chemical sciences; Biological Sciences; Mitochondrial targeting delivery; Hearing Loss; aminoglycoside; SS-31; geranylgeranylacetone; **zebrafish** lateral line

Categories/Classification
Research Areas: Science & Technology - Other Topics
Web of Science Categories: Multidisciplinary Sciences

Citation Network

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16
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[Aminophenol-modified gold nanoparticles kill bacteria with minimal ototoxicity](#)
CHEMICAL COMMUNICATIONS

Li Xixing; Zhang Guangyuan; Cui Weina;
李熙星; 张光远; 崔卫娜;
[Recent advances in drug delivery to the inner ear using nanocarriers](#)
[基于纳米载体的内耳药物递送最新研究进展](#)
Chinese Journal of Biophysics

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Data Citation Index

How to cite research data?

View data Export Add To Marked List 1 of 16,286

SS-31 peptide enables mitochondrial targeting drug delivery: a promising therapeutic alteration to prevent hair cell damage from aminoglycosides

By: Kuang, Xiao; Zhou, Shuang; Guo, Weiling; Wang, Zhenjie; Sun, Yanhui; Liu, Hongzhuo
Figshare
DOI: [10.6084/m9.figshare.5678797](https://doi.org/10.6084/m9.figshare.5678797)
Published: 2017
Indexed: 2022-02-11
Content Type: Data set
Data Type: Dataset

DCI provides the 'DataCite' citation guidelines (<https://www.datacite.org>)

Clarivate recommends citing this resource as:
Kuang, Xiao; Zhou, Shuang; Guo, Weiling; Wang, Zhenjie; Sun, Yanhui; Liu, Hongzhuo (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>

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Most Recently Cited by
Wang, L; Zheng, WF; Jiang, XY; et al.
Aminophenol-modified gold nanoparticles kill bacteria with minimal ototoxicity
CHEMICAL COMMUNICATIONS
Li Xing; Zhang Guangyuan; Cui Weina;
李翔; 张光远; 崔卫娜;
Recent advances in drug delivery to the inner ear using nanocarriers
基于纳米载体的内耳药物递送最新研究进展
Chinese Journal of Biotechnology

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).

The screenshot displays the Web of Science search results interface. On the left, the 'Refine results' sidebar includes a search bar and 'Quick Filters'. The 'Associated Data' filter is selected, showing 2,195 results. The main results list shows two articles. The first article, 'Circular RNAs are a large class of animal RNAs with regulatory potency' by Memczak, S.; Jens, M.; (...); Rajewsky, N. (2013), has 4,185 citations and 51 references. A callout box labeled 'Associated data' points to a link 'View Associated Data' in the article's abstract. The second article, 'A mammalian microRNA expression atlas based on small RNA library sequencing' by Landgraf, P.; Rusu, M.; (...); Tuschl, T. (2014), has 2,792 citations and 69 references. A purple callout box at the bottom center states: 'Refine results for *Associated Data* to surface articles that mention more specific data sets or studies indexed in Data Citation Index.'

Refine results

Search within results for...

Quick Filters

- ☐ Highly Cited Papers 32
- ☐ Review Articles 7
- ☐ Early Access 1
- ☐ Open Access 1,946
- ☒ Associated Data 2,195

Publication Years

- ☐ 2021 114

0/2,195 Add To Marked List Export Sort by: Citations: high

1 Circular RNAs are a large class of animal RNAs with regulatory potency
Memczak, S.; Jens, M.; (...); Rajewsky, N.
Mar 21 2013 | NATURE 495 (7441), pp.333-338
(circRNAs) in animals are an enigmatic class of RNA with unknown function. To explore circRNAs systematically, we sequenced and computationally analysed human, mouse and nematode RNA. We detected thousands of well-expressed, stable circRNAs, often showing tissue/developmental-stage ... Show more
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4,185 Citations
51 References
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2 A mammalian microRNA expression atlas based on small RNA library sequencing
Landgraf, P.; Rusu, M.; (...); Tuschl, T.
Jun 2014 | NATURE 508 (7493), pp.187-191
MicroRNA expression atlas based on small RNA library sequencing
fully or partially expressed in all tissues and cell types
pattern of expression

2,792 Citations
69 References

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/webofsciencegroup/support/wos/dci/#>

- **Recommended practices to promote scholarly data citation and tracking**

https://clarivate.com/webofsciencegroup/wp-content/uploads/sites/2/2019/08/Crv_WOS_Whitepaper_DCI_web.pdf

Thank you!

Eniko Toth Szasz

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