

**University of Kentucky**

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**From the Selected Works of Adrian K. Ho**

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May 23, 2017

# Research Data Sharing and Reuse

Adrian K. Ho, *University of Kentucky*



Available at: <https://works.bepress.com/akho/54/>

# Research Data Sharing and Reuse

Adrian K. Ho

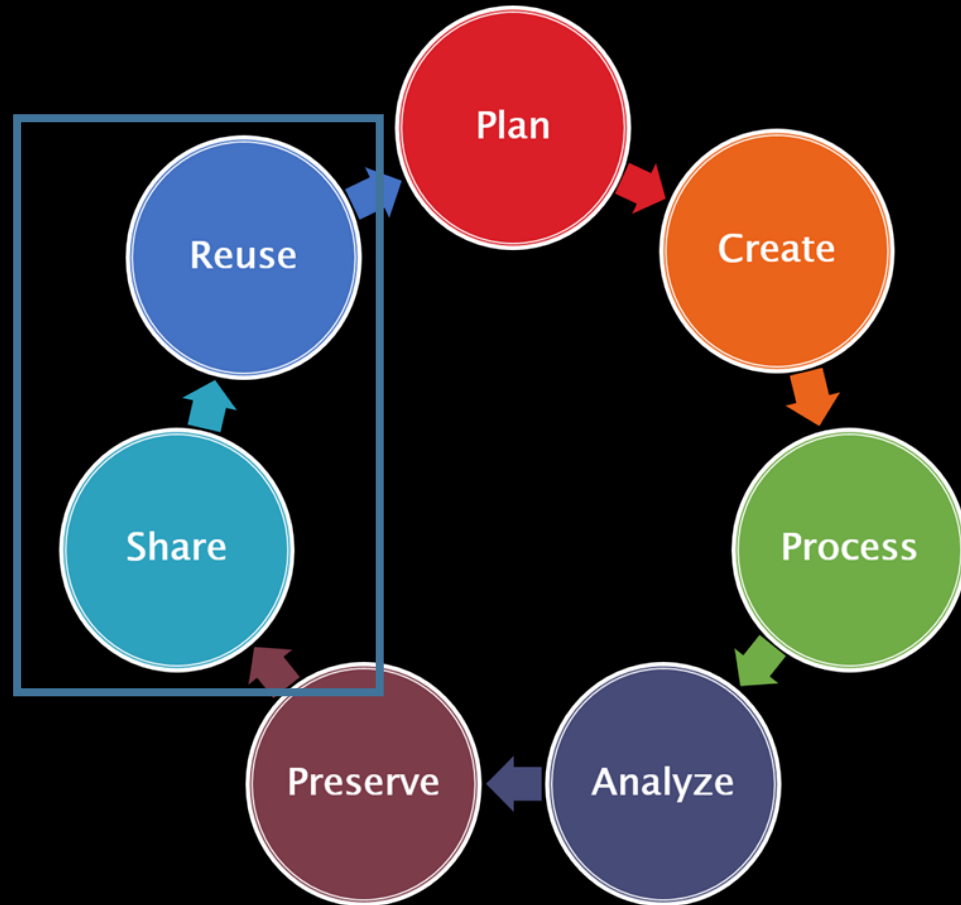
University of Kentucky Libraries

CAMTech IAB Meeting

Lexington, KY

May 23, 2017

# Actions Involved in Research Data Management



# Reasons for Sharing Research Data

- Avoiding loss of research data
- Maximizing benefits through reuse of data for scholarship and innovation
- Addressing reproducibility issue
- Funding agencies' requirements
- Journals' requirements
- Norm in certain research communities

# Benefits of Sharing Research Data

- Possible offer for collaboration from other researchers
- More citations of the associated article(s)
- Citations of shared data
- Better chance to gain access to other researchers' data

# When and What to Share

- Sharing data around the publication time of the associated article
- Data that supports the publication
- In a format most useful to other researchers
- Codes for computational research
- Exemption for sensitive data or data tied to patentable inventions

# Preparation for Research Data Sharing

- Quality control of data
- Documentation about data and research process
- Related information

# How and Where to Share

- Publishing data as the supplementary file(s) of the associated article
- Publishing an article in a data journal
- Deposit of data in an online repository



# Decision on Data Repository

## Criteria Recommended by MIT Libraries

- Scope
- Metadata and indexing
- Deposit policies and workflow
- Review procedures
- Access policies and procedures
- Tracking and citation
- Preservation features

# Institutional Repository at UK

<http://uknowledge.uky.edu/>

The screenshot shows the UKnowledge website interface. At the top, the University of Kentucky logo and 'UKnowledge' title are displayed. A navigation bar includes links for HOME, ABOUT, FAQ, and MY ACCOUNT. The main content area features a search bar with the text 'Enter search terms:' and a 'Search' button. Below the search bar, there is a dropdown menu for 'in this repository' and an 'Advanced Search' link. A 'Notify me via email or RSS' link is also present. The left sidebar contains several sections: 'BROWSE' with links for Collections, Disciplines, and Authors; 'AUTHOR CORNER' with links for Author Rights/Copyright, Author FAQ, and Submit Research; and 'LINKS'. The main content area includes a paragraph describing UKnowledge as a digital collection of unique scholarship. Below this is a 'Browse Research and Scholarship' section with a 'Follow' button and several links: Colleges, Departments, or Centers; Journals and Peer-Reviewed Series; Theses and Dissertations; Conferences and Events; Image Galleries; UKnowledge Researcher Profiles; University Press of Kentucky; and University of Kentucky Expert Gallery. A 'Reader from:' section shows the location as Taegu, Daegu-gwangyeoksi, Korea, Republic Of, with a book cover for 'State Child Welfare Policy: Causes and Consequences' by Dana D. Connelly. At the bottom, there is a world map with location markers.

# Institutional Repository at Iowa State

<http://lib.dr.iastate.edu/>

The screenshot shows the homepage of the Iowa State University Digital Repository. The header is red with the text "IOWA STATE UNIVERSITY Digital Repository". Below the header is a navigation menu with links for HOME, REPOSITORY, PRESS, ABOUT, FAQ, and MY ACCOUNT. The main content area is divided into several sections:

- Search:** A search box with the text "Enter search terms:" and a "Search" button. Below it is a dropdown menu labeled "in this repository" and a link for "Advanced Search".
- Browse:** A section with links for "Collections", "Disciplines", "Authors", and "Profiles".
- Author Corner:** A section with links for "Author FAQ", "Submit Research", "Profiles", and "How to Cite".
- Discover Knowledge:** A section with a "Follow" button and a list of links: "Iowa State University Digital Repository", "Iowa State University Digital Press", "Iowa State University Theses and Dissertations", and "Selected Works Profiles".
- Expert Gallery:** A section with a link for "Expert Gallery".

At the bottom of the page, there is a "Reader from:" section with a red square icon and the text "Hong Kong, Hong Kong (Sar), Hong Kong". Below this is a "Framing China: how U.S. media reported eight U.S. state visits by top Chinese leaders" section with the author "Yao Chang" and a "Retrospective: Theses and Dissertations" link. There are also navigation arrows at the bottom right.


# Registry of Research Data Repositories

<http://www.re3data.org/>

Search Browse Suggest Resources Contact DataCite

re3data.org  
REGISTRY OF RESEARCH DATA REPOSITORIES

Search Search



**re3data.org Reaches a Milestone and Begins Offering Badges**  
re3data.org has reached a milestone of identifying and listing 1,500 research data repositories, making it the largest and

**Enhancements to creating and updating re3data**  
We are happy to announce a new feature that enables users to more easily suggest corrections and enhancements of

**New re3data.org Schema and Search Functionality**  
We are pleased to announce the publication of version 3.0 of the "Metadata Schema for the Description of Research

# Open Access Directory: Data Repositories

[http://oad.simmons.edu/oadwiki/Data\\_repositories](http://oad.simmons.edu/oadwiki/Data_repositories)

The screenshot shows the 'Data repositories' page on the Open Access Directory (OAD) website. The page is structured as follows:

- Page Header:** Includes 'Page Discussion', 'Read', 'View source', 'View history', and a search bar.
- Section Header:** 'Data repositories' with the OAD logo and the text 'This list is part of the Open Access Directory'.
- Introduction:** A list of bullet points explaining the purpose of the directory and providing instructions for users.
- Archaeology:** A section listing repositories such as 'Archaeology Data Service' and 'Open Context'.
- Astronomy:** A section listing repositories like 'Astronomical Data Archives Center' and 'National Space Science Data Center'.
- Biology:** A section listing repositories such as 'The Arabidopsis Information Resource' and 'The Cell: An Image Library'.
- Contents (hide):** A table of contents listing 15 categories from Archaeology to Social sciences.
- Navigation Sidebar (Left):** Contains links for 'Contribute content', 'Navigation', 'Interaction', and 'Tools'.

# Required Information for Data Deposit

- Creator name (with ORCID identifier)
- Dataset title
- Publisher
- Publication year
- Resource type
- Identifier (usually provided by publisher)

# Recommended Information for Data Deposit

## If applicable

- Description
- Subject(s)
- Contributor(s)
- Additional date(s)
- Related identifier(s)
- Geographic location

# Rights and Licensing for Reuse

## Creative Commons Licenses

- CC0 tool (no rights reserved)
- Attribution (CC BY) license
- Other licenses with specific restrictions

## Open Data Commons licenses


- Public Domain Dedication and License
- Attribution License



# Record of Shared Research Data

## Ergot and Loline Alkaloid Concentrations in Endophyte-Infected Tall Fescue Tillers

[Rebecca L. McCulley](#), *University of Kentucky* [Follow](#)

**Researcher ORCID Identifier**  
 <http://orcid.org/0000-0002-2393-0599>

**Dataset Creation Date**  
6-2009

**Release Date**  
2-2017

**Publisher**  
University of Kentucky Libraries

**Description**  
Approximately 40 tall fescue tillers were randomly collected and frozen from each of the 20 treatment plots.  
Tillers were cut at 7.6 cm above ground level and tested for the presence of the Epichloe endophyte using an enzyme-linked immunosorbent assay.  
Tillers from each plot were sorted into 'infected' vs 'uninfected' groups, lyophilized, and ground through a 1mm screen using a Cyclotec 1093 mill.  
Ground material from the endophyte infected tillers was analyzed for ergot and loline alkaloids in the lab of Lowell Bush at the University of Kentucky, Plant and Soil Sciences Dept.  
For details on alkaloid analyses see: McCulley et al. Oct. 2014. *Frontiers in Chemistry*, Volume 2, Article 88 ([www.frontiersin.org](http://www.frontiersin.org) – doi: 10.3389/fchem.2014.00088)

**Digital Object Identifier (DOI)**  
<https://doi.org/10.13023/K2RP48>

**Rights**  
© 2017 Rebecca L. McCulley  
This dataset is distributed under the terms of the [Creative Commons Attribution 4.0 International License](#), which permits unrestricted use, distribution, and reproduction in any medium, provided that the dataset creator and source are credited and that changes (if any) are clearly indicated.

**Supporting Information**  
Details about the experiment are on the first tab of the downloadable file.

**File Format**  
Excel file

**File Size**  
26 KB

**Spatial Coverage**  
NCCC plots, University of Kentucky, Spindler Research Farm

[Download](#)

[Additional files available below](#)

Included in  
[Plant Sciences Commons](#)  
[Soil Science Commons](#)

SHARE  
[f](#) [t](#) [in](#) [G+](#) [e](#) [+](#)

# Relevant Resources

Briney, K. (2015). *Data Management for Researchers: Organize, Maintain and Share Your Data for Research Success*. Exeter, UK: Pelagic Publishing.

Data Sharing Requirements by Federal Agency

<http://researchsharing.sparcopen.org/data>

Research Funder Data Sharing Policies

<https://sparcopen.org/our-work/research-data-sharing-policy-initiative/funder-policies/>

# Relevant Resources

Data Repository Comparison Chart (from MIT Libraries)

<http://libraries.mit.edu/repository-comparison>

UKnowledge (institutional repository at University of Kentucky)

<http://uknowledge.uky.edu/>

Iowa State University Digital Repository

<http://lib.dr.iastate.edu/>

# Relevant Resources

Registry of Research Data Repositories (re3data)

<http://www.re3data.org/>

Open Access Directory: Data Repositories

[http://oad.simmons.edu/oadwiki/Data\\_repositories](http://oad.simmons.edu/oadwiki/Data_repositories)

CC0 Tool

<https://creativecommons.org/share-your-work/public-domain/cc0/>

# Relevant Resources

Creative Commons Licenses

<https://creativecommons.org/share-your-work/licensing-types-examples/licensing-examples/>

Open Data Commons Public Domain Dedication and License

<https://opendatacommons.org/licenses/pddl/>

Open Data Commons Attribution License

<https://opendatacommons.org/licenses/by/>