Mitigating the Risk: Identifying Strategic University Partnerships for Compliance Tracking of Research Data and Publications

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Mitigating the Risk:

Identifying Strategic University Partnerships for Compliance Tracking of Research Data and Publications

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The Problem
Lots of Data

- Researchers generate Lots of Data
- Not all researchers organize and manage their data
- Faculty *may* be required to deposit data to make it publicly accessible
It’s Here!

Dancing Discovery … “Explored!” photo by Stephanie, CC-by-NC 2.0
What Keeps Our VPR Up at Night?
Can you find where your institution’s data is hiding?

*Hide your face* photo by [Desiree Wolf](http://www.desireewolf.com) [CC-by-NC-SA](http://creativecommons.org/licenses/by-nc-sa/2.0)
How Can Libraries Help?

Outside a dog … photo by Bruno, CC-by-NC 2.0
Librarian Skills

- **Data Management Skills**
  - Familiar with Data Management Plans
  - Familiar with Data Repositories
  - Familiar with Depositing Data
  - Discipline agnostic

- **Cataloging Skills**
  - Understand how to make things discoverable
Partnership

Bone 2 photo by jb  CC-by-2.0
USU Data Task Force

- 16 members with representatives from:
  - Library
  - Research Office
  - Information Technology
Smaller group met regularly

- Library
  - Data Services Coordinator
  - Metadata Specialist

- Research Office
  - Associate VPR
  - Director Research Development
  - Sponsored Programs Director
  - Programmer
Key Resources

- Kuali: an electronic award management system; USU’s official record for Sponsored Programs
- DigitalCommons@USU: USU’s institutional repository
- USU’s Integrated Library System: Sierra
Kauli captures basic elements for future Primary Master Record.

DSP notifies PI of requirements, requests DMP; DMP and/or Primary Metadata Document sent to Library; Library creates records in Digital Commons.

DSP sends PI notice every 6 months to update PMD, sends updated PMD to Library; Library verifies data, creates records.

DSP continues to notify PI, even after closeout, until all data deposited.
DMP - Guiding Document
Workflow calls for the Library to create

- Digital Commons:
  - Master Record – represents the PI’s Grant
    - Includes the DMP, if allowed
    - Includes the “Primary Metadata Document”
  - Dataset records
    - Metadata only
    - Metadata plus data files
  - Metadata records for publications

- ILS:
  - Dataset Records
Characterizing Stress Responses of Industrial Strains of Bifidobacteria and their Use for Extending the Survival of Bifidobacteria in Foods

Jeff Broadbent, Utah State University

Document Type
Other

Publication Date
5-9-2016

Grant Number
USDA 2006-35503-17194

Funding Agency
USDA NIFA

Comments
Data management plan from USDA NIFA Grant 2006-35503-17194

Recommended Citation
http://demo.usu.bepress.com/federally_funded_research/1

Additional Files

- PMD-Test-Jeff-Rev2.xlsx (30 KB)
- Primary Metadata Document
Primary Metadata Document

- Generated by Kuali and PI
- Updates requested every 6 months
- Used for
  - Setting up initial Master Record
  - Verifying and creating records for data deposits
  - Adding funding information to publication records in Digital Commons
Jeff Broadbent

Characterizing Stress Responses of Industrial Strains of Bifidobacteria and Their Use for Extending the Survival of Bifidobacteria in Foods

Logan, UT

Utah State University

Sep 1 2006-Aug 31, 2010

USDA 2006-35503-17194

food products, bacteria, quality maintenance in storing and marketing food products, bifidobacterium, probiotic, stress response


2013

Expression data from Bifidobacterium longum strains exposed to hydrogen peroxide stress

Stress survival tactics in bacteria utilize the up- and down-regulation of stress response genes. In bacteria that lack classical stress response genes for oxidative stress, other cellular systems can be used for cell survival. We used custom microarrays to study the regulation of genes in Bifidobacterium longum strains to oxidative stress to elucidate novel stress response mechanisms.


2013

TXT, XML

http://doi.org/10.1016/j.jbiotec.2015.06.405
Dataset Record

Metadata records created in DigitalCommons

Location of datasets verified
<table>
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<th>1 dataset.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Content</strong></td>
<td>computer dataset</td>
</tr>
<tr>
<td><strong>Carrier</strong></td>
<td>online resource</td>
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| **Note**        | Citation for associated article: Oberg, T. S., Ward, R. E., Steele, J. L., & Broadbent, J. R. (2015). Transcriptome analysis of Bifidobacterium longum strains that show a differential response to hydrogen peroxide stress. Journal Of Biotechnology, 21258-64. doi:10.1016/j.jbiotec.2015.06.405. This entry is the master record for a whole genome shotgun sequencing project and contains no sequence data. See additional links below for access to full sequence data.

The Bifidobacterium longum D2957 whole genome shotgun (WGS) project has the project accession AQGL00000000. This version of the project (01) has the accession number AQGL01000000, and consists of sequences AQGL01000001-AQGLD01000013. |
| **Summary**     | Bifidobacterium longum D2957, whole genome shotgun sequencing project. |
| **Local Note**  | USU Data Deposits。

**Funding**
USDA Cooperative State Research, Education, and Extension Service Improving Food Quality and Value Program National Research Initiative Grant 2006-35503-17194. |
| **Subject**     | Genomics |
| **Added Author**| Broadbent, Jeff R., researcher. Ward, Robert E., researcher. Steele, James L., researcher. |
Publications
Many will already have metadata records in DigitalCommons
Add funder information to existing records
Optional – add URL from agency repository to DigitalCommons record
If no record exists, create record with appropriate funder and agency repository information

<table>
<thead>
<tr>
<th>Funding Agency</th>
</tr>
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<tbody>
<tr>
<td>USDA 2006-35503-17194</td>
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Identification of plasmalogens in the cytoplasmic membrane of *Bifidobacterium animalis* subsp. *Lactis*
Library Staff and Work Flow

- Creation of “Master Record” – including adding DMP and PMD and PMD revisions
  - Student Assistant

- Verification of data links and creation of dataset records
  - Student Assistant **

- Creations and/or editing of publication records, including verification of deposit in agency repository
  - Student Assistant **

- Creation of ILS records
  - Student assistant

  (** problems addressed by supervisor)
## MARC/Dublin Core Mappings

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<th>DC Mapping</th>
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<td>Title/Name assigned to data set</td>
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<td>245 $c</td>
<td></td>
<td>All authors/researchers listed</td>
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<td>Place where data originated</td>
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<td>264 $b</td>
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<td>Date</td>
<td>Year of publication/deposit</td>
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<td>Name(s) of additional researcher</td>
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<td>If reported, include the spatial coverage for the dataset</td>
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<td>Coverage.Temporal</td>
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Rewards (Benefits)
Benefits - Partnerships

“Fight for your right to bite” photo by Eddy Van 3000  CC by-SA-2.0
Benefits for University

- Verify compliance
- Capture the location of data while it’s (relatively) fresh in the mind of researchers
  - Opportunity to “rescue” data insecurely stored
- Create permanent records of data
- Increase discoverability of data
- Reporting functions help University to understand and analyze research data creation and lifecycles
- Sharing successful DMPs = better future DMPs
Benefits for Library

- Increases value on campus, strengthens partnership with Research Office
- Increases interactions with faculty and demonstrates value by securing data and helping faculty comply with DMP
- Gains opportunity to help faculty learn about better options for data deposit
- Cross campus synergistic relationships
Assessment

- Library will assess:
  - Staff time (current and projected future), costs to library
  - Stakeholder satisfaction with workflow & services
  - Change in quality of Data Management Plans (DMPs)
Project Goal

- Create a audit system that efficiently tracks data and publication deposits resulting from federally funded research with as little impact as possible on staffing of any group involved (PI, Research Office, Library)
  - Library – most of the work will be handled by student employees
- Going live Fall 2016
- Developing benchmarks to define success or identify areas for improvement
Questions?

“Rio the black mixed breed dog with newspaper” photo by Found Animals Foundation CC by-SA-2.0
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