Presenters (in order of presentation):

- Lori Schultz, Assist. Vice President, Research Intelligence, Univ. of Arizona
- Ellen Dubinsky, Assoc. Librarian, Lead, Scholarly Communications Unit, Univ. of Arizona
- Fernando Rios, Assoc. Specialist, Research Data Management, Univ. of Arizona
- Megan Senseney, Dept. Head, Research Engagement, UA Libraries

Moderator: Kris West, Director, Research Ethics & Compliance, COGR
Digging into DPIs

UNIVERSITY OF ARIZONA / COGR

SEPTEMBER 2022
Outline

- Introductions
- Intro to the topic and legislative/regulatory mandates (Lori)
- How DPIs work (Ellen)
- DPI Benefits and use in publications and data sharing (Ellen/Fernando)
- Use of DPIs in tracking funding and in SciENcv (Lori)
- Q&A (All)
What is/isn’t a DPI?

- PIDs must be: Open, Findable, Accessible, Interoperable, Reusable (FAIR) and Researcher Driven

- PIDs are long-lasting references to digital resources, contributors, organizations
  - Digital Object Identifier (DOI): publications and datasets
  - Grant ID: Grant award number
  - ROR: Research Organizations
  - RRID: Research Resources (cores, cell lines)
  - ORCID: people (researchers & contributors)

- Not a DPI: Your SSN, DL number, CC number, etc
Sample ORCID Record

https://orcid.org/0000-0002-1597-8189

Names

Name
Lori Ann Schultz

Also known as
Lori Ann McAllester

Biography

Activities

› Employment (3)

› Education and qualifications (2)

› Invited positions and distinctions (1)

› Membership and service (4)

› Funding (1)

› Works (14)
### Employment (3)

**University of Arizona: Tucson, AZ, US**

- **2020-07-01 to present | Assistant Vice President, Research Intelligence (Research, Innovation & Impact)**

*Source: Lori Ann Schultz*

### Funding (1)

**Southern Arizona Biomedical Research Symposium**

- **2016-07 to 2018-06 | Contract**
  - Arizona Biomedical Research Commission (Phoenix, US)

*Source: Lori Ann Schultz*
DPIs in the Federal Landscape

- Timeline of Foreign Influence / Research Security
- NSPM-33 Guidance
- Common Forms
- Public/Open Access policies & announcements
DPIs in the Federal Landscape - Timeline

- Aug 2018: NIH Letters
- May-Sept 2019: NSTC/JCORE
- DEC 2019: NDAA
- JAN 2021-22: NSPM-33 & Guidance
- SEPT 2022: Common Forms
January 2022 OSTP Implementation Guidance

5 Key Sections

1. Disclosure Requirements and Standardization
   a. Biosketches
   b. Current & Pending Support / Other Support
2. Digital Persistent Identifiers (ie. ORCID)
3. Consequences for Violation of Disclosure Requirements
4. Information Sharing
5. Research Security Programs
Agency Actions since Jan 2022

- NSF Proposal & Award Policies & Procedures Guide (PAPPG) draft
  - Use of ORCID
  - Proposed elimination of fillable PDFs for Biographical Sketch and Current & Pending Support Forms

- Draft Common forms
  - Biographical Sketch
  - Current & Pending (Other) Support
  - To be used by all agencies, with some variances
  - Comment period open until Oct 31
Common Forms

- Biographical Sketches
- Current & Pending (other) support form
Public Access Policies & Guidance

- NIH Data Management & Sharing
  - January 2023: public comment support for use of PIDs
  - Budget, Plan, Share (Comply)
- OSTP Guidance Aug 2022
  - All agencies that fund R&S implement policies by December 2025
  - DPI included in the minimum metadata for scholarly publications & data
- This isn’t new:
  - Federal and non-federal sponsors have had sharing guidelines for years
  - [https://data.library.arizona.edu/data-management/data-management-plans/funding-agencies-requirements](https://data.library.arizona.edu/data-management/data-management-plans/funding-agencies-requirements)
Why DPIs matter
DPIs work because they are ...

- Unique
- Resolve (prevent link rot)
- Links between persistent identifiers of the same or different types
- Associated with metadata rich with details
How DPIs work
How DPIs work:

APIs (Application Programming Interface)
How DPIs work

- Crossref: doi.org/10.2458/jpe.4686
- DataCite: doi.org/10.25422/azu.data.14869740.v3
- Funders Registry: doi.org/10.13039/100000002
- Research Organization Registry: ror.org/03m2x1q45
- ORCID: orcid.org/0000-0002-2874-0284
- Research Resource Identification:
  - CVCL_V625
  - AB_2215411
  - SAMN15879556
DPI Benefits

- **Increase efficiency and save time**
- Enable accurate recognition for scholarly works and contributions
- Increase discoverability of research outputs
- Increase use of research outputs
- Facilitate better analysis and reporting
- **Ensure compliance with funder and institutional policies**
DPI Benefits
### The Antibody Registry

**AB_2215411**

Showing 1 - 6 results out of 6 with the query: **AB_2215411**

**Note:** If possible, search using a catalog number. Avoid using "llc", "inc", or any other abbreviation at the end of your search.

<table>
<thead>
<tr>
<th>Antibody ID</th>
<th>Antibody Name</th>
<th>Target Antigen</th>
<th>Proper Citation</th>
<th>Clonality</th>
<th>Reference 1</th>
<th>Comments</th>
<th>Clone ID</th>
<th>Host Organism</th>
<th>Vendor</th>
<th>Cat Num</th>
</tr>
</thead>
<tbody>
<tr>
<td>AB_2215411</td>
<td>Wnt3a (C64F2)</td>
<td>Wnt3a See NCBI gene human, rat, mouse</td>
<td>(Cell Signaling Technology Cat# 2721, RRID:AB_2215411)</td>
<td>monoclonal antibody</td>
<td>PMID:30017354, PMID:30304675, PMID:31390565</td>
<td>Applications: W, IP. Consolidation on 11/2018: AB_10233982, AB_10831528, AB_2215411.</td>
<td></td>
<td>rabbit</td>
<td>Cell Signaling Technology</td>
<td>2721</td>
</tr>
</tbody>
</table>
DPI Benefits

3 results

1. Mitofusin 2 Regulates Axonal Transport of Calpastatin to Prevent Neuromuscular Synaptic Elimination in Skeletal Muscles.
   - PMID: 30017354 Free PMC article.

2. A RECK-WNT7 Receptor-Ligand Interaction Enables Isoform-Specific Regulation of Wnt Bioavailability.
   - PMID: 30304675 Free PMC article.

3. SFRPs Are Biphasic Modulators of Wnt-Signaling-Elicited Cancer Stem Cell Properties beyond Extracellular Control.
   - PMID: 31360255 Free PMC article.
DPI Benefits – Data Management & Sharing

- Why talk about data management and sharing here?
  - NSPM-33 – increased recommendations encouraging DPIs is expected across agencies
  - Data management plans and data sharing by funded PIs expected by most agencies now
  - DPIs another tool for monitoring compliance

- 2 examples: data publication in a data repository, data management plans
DPI Benefits – Data Sharing

- Data repositories = where to share data
- Repositories use DPIs to varying degrees
- Complying with machine-readability requirements means using DPIs to link stuff together
  - Relates to FAIR principles (findable, accessible, interoperable, reusable)
- Allows automatic linking and tracking of outputs, people, organizations, etc.
- Example: University of Arizona Research Data Repository (ReDATA)
  - https://doi.org/10.25422/azu.data.14632593.v1
DMP is a required document for grant applications for most federally funded research. What, where, when, how long, who, how w.r.t. data products.

Using natural language processing to determine predictors of healthy diet and physical activity behavior change in ovarian cancer survivors.

Contributors to this project

- Damian Yukio Romero Diaz: Data-curation, Other, University of Arizona (arizona.edu), https://orcid.org/0000-0003-4661-0256
- Hagan Franks: Data-curation, University of Arizona (arizona.edu), https://orcid.org/0000-0002-9267-5595
- John Culnan: Other, University of Arizona (arizona.edu), https://orcid.org/0000-0001-7327-1053
- Rebecca Shamp, Other, LexMachina

When connecting to this DMP to related project outputs (such as datasets) use the ID: https://doi.org/10.48321/D1BK5T

Funding status and sources for this project

- Status: Granted
- Funder: National Institutes of Health (NIH)
- Grant: https://reporter.nih.gov/search/qfhaBJoM20qq64VSqwCScg/project-details/10109452
Use of DPIs to Track Funding & in SciENcv
DPIs in the Grant Lifecycle

- Proposals
  - Coming Common Forms
  - Some non-federal systems already included ORCID

- Awards
  - Grant IDs
  - Federal and Non-federal sponsors
  - Progress Reporting

- Publications/Data
  - DOIs are the backbone of sharing
DPIs and SciENcv

- SciENcv
  - Developed by the FDP and federal agencies
  - Generate biosketches & support forms
  - Connected with ORCID to populate & reuse data

- How it works
  - SciENcv already supports ORCID connection
  - Populates forms for NSF/NIH/Dept of Ed IES
  - Consumes changes in forms from the agencies
### A. PROFESSIONAL PREPARATION

List undergraduate and graduate education and postdoctoral training. List the year the degree was received as well as inclusive dates of postdoctoral training.

<table>
<thead>
<tr>
<th>INSTITUTION</th>
<th>LOCATION</th>
<th>MAJOR/AREA OF STUDY</th>
<th>DEGREE (If applicable)</th>
<th>YEAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Arizona</td>
<td>Tucson, AZ, US</td>
<td>Accounting</td>
<td>Master of Accounting</td>
<td>2011</td>
</tr>
<tr>
<td>University of Arizona</td>
<td>Tucson, Arizona, US</td>
<td>Political Science</td>
<td>Bachelor of Arts</td>
<td>1994</td>
</tr>
</tbody>
</table>