Digging Into DPIs

September 23, 2022

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**

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Moderator: Kris West, Director, Research Ethics & Compliance, COGR

COGR

Digging into DPIs

UNIVERSITY OF ARIZONA / COGR

SEPTEMBER 2022

Outline

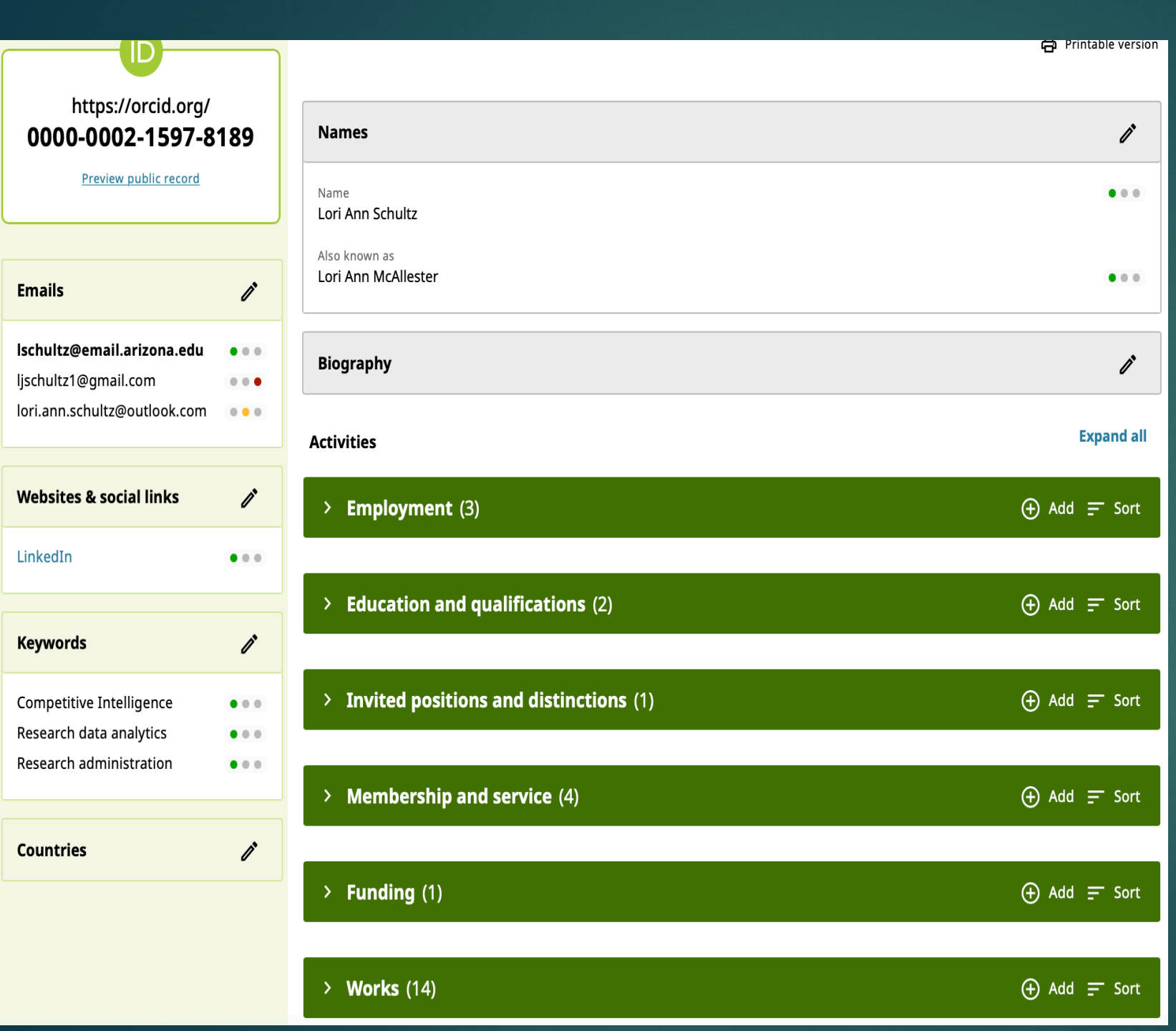
- Introductions
- Intro to the topic and legislative/regulatory mandates (Lori)
- How DPIs work (Ellen)
- DPI Benefits and use in publications and data sharing (Ellen/Fernando)
- Use of DPIs in tracking funding and in SciENcv (Lori)
- Q&A (All)

What is/isn't a DPI?

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

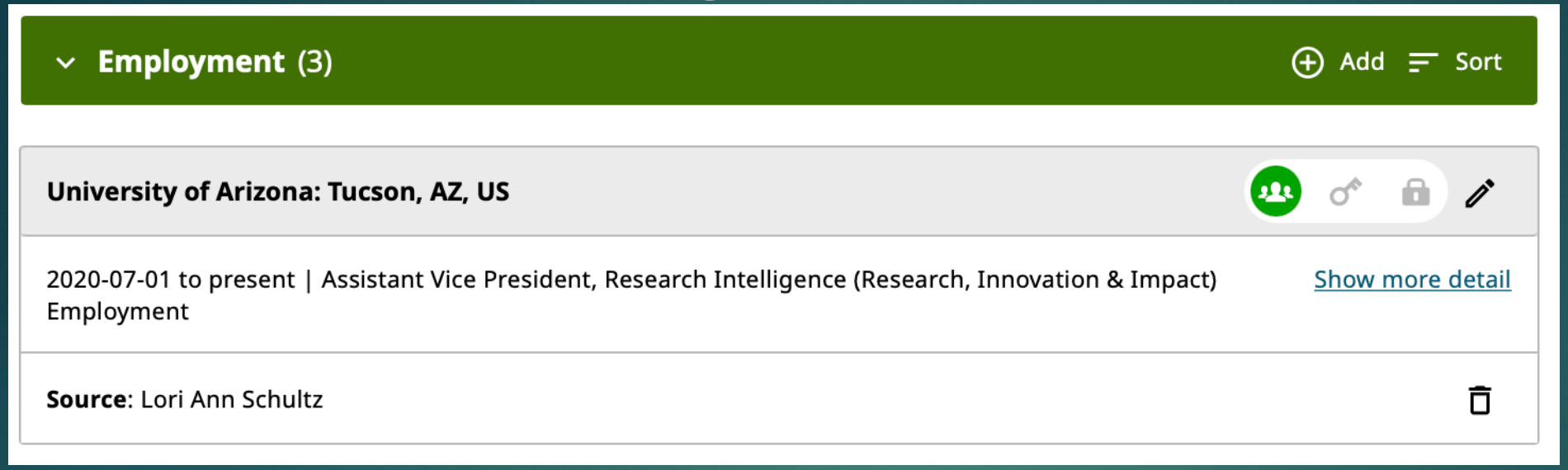
- PIDs are long-lasting references to digital resources, contributors, organizations
  - Digital Object Identifier (DOI): publications and datasets
  - Grant ID: Grant award number
  - ROR: Research Organizations
  - RRID: Research Resources (cores, cell lines)
  - ORCID: people (researchers & contributors)

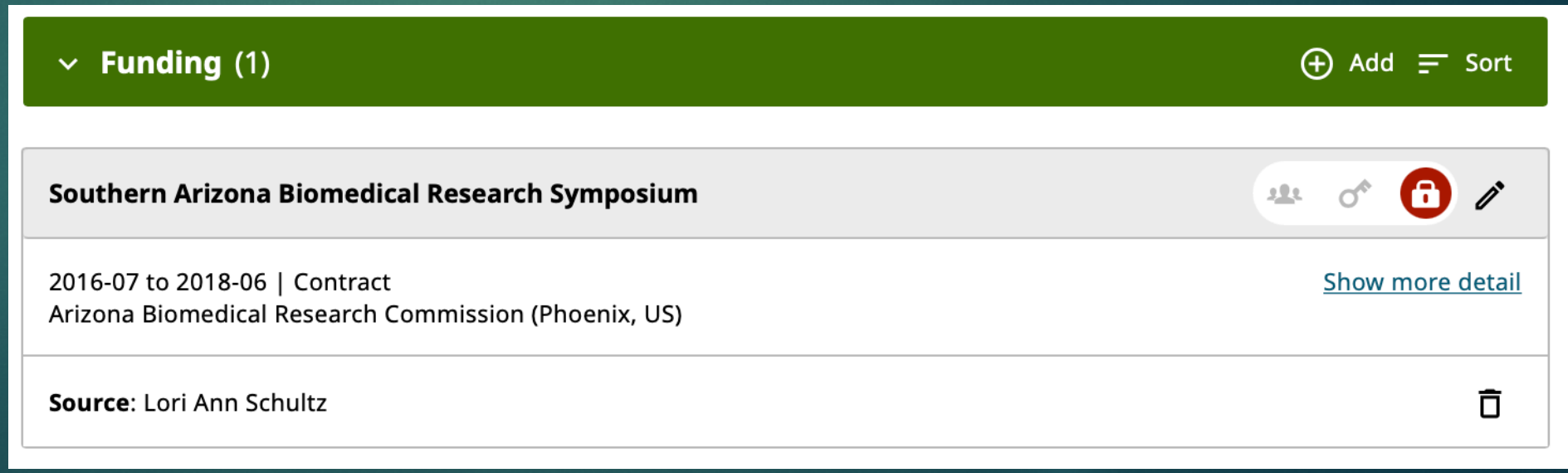
- Not a DPI: Your SSN, DL number, CC number, etc



Sample ORCID Record

Visibility Settings

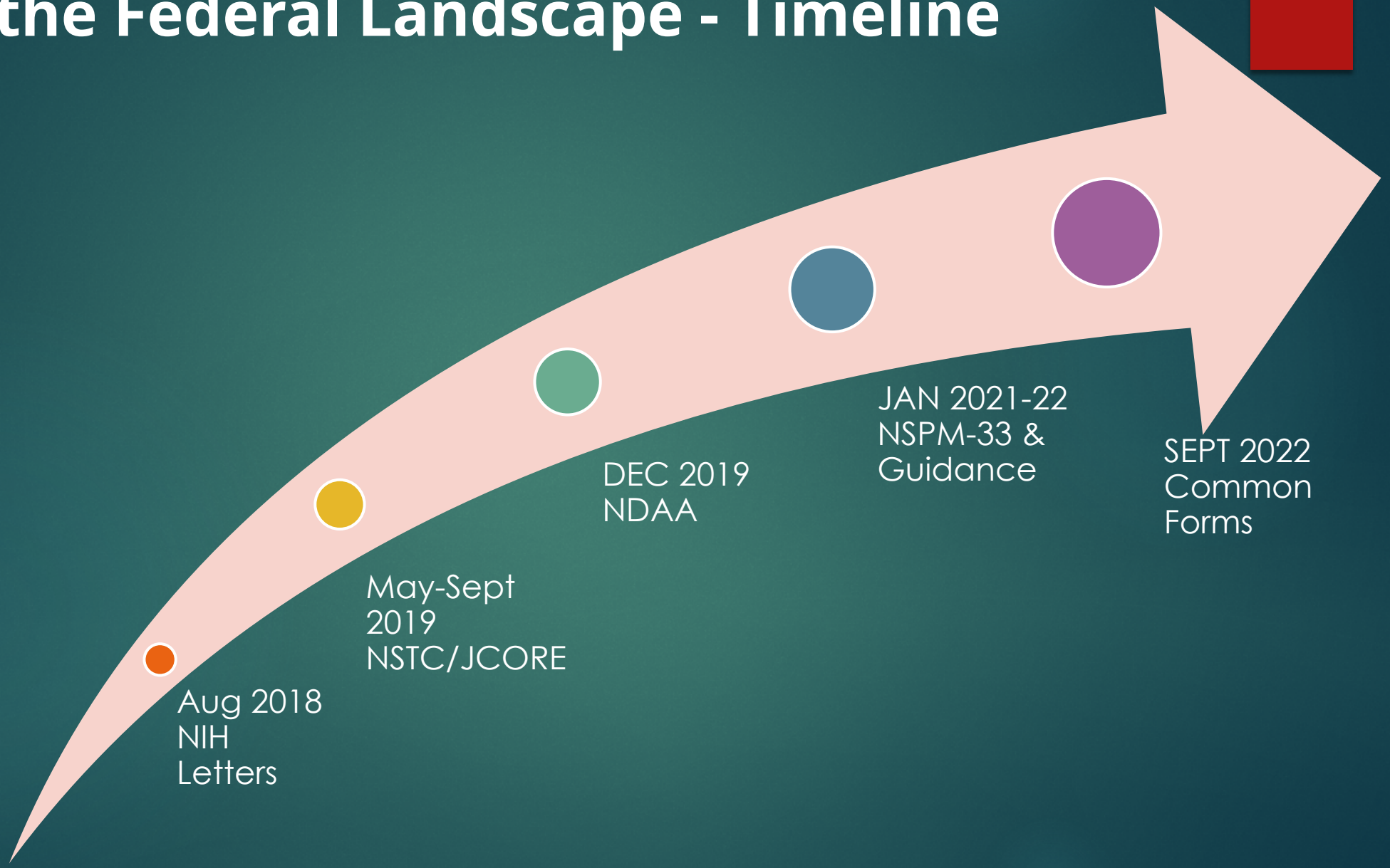




DPIs in the Federal Landscape

- Timeline of Foreign Influence / Research Security
- NSPM-33 Guidance
- Common Forms
- Public/Open Access policies & announcements

DPIs in the Federal Landscape - Timeline



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

Identifying Information

***Name:** Enter the name of the senior/key person (Last name, First Name, and Middle Name, including any applicable suffix).

Persistent Identifier (PID) of the Senior/Key Person: Enter the PID of the senior/key person. The PID is a unique, open digital identifier that distinguishes the individual from every other researcher with the same or a similar name.

	Section	*	Field	Format
1	Identifying Information	*	Name	Last, First(Middle, Suffix)
2			Persistent Identifier (PID) of the Senior/Key Person	URL, e.g.: https://orcid.org/NNNN-NNNN-NNNN-NNNN

Public Access Policies & Guidance

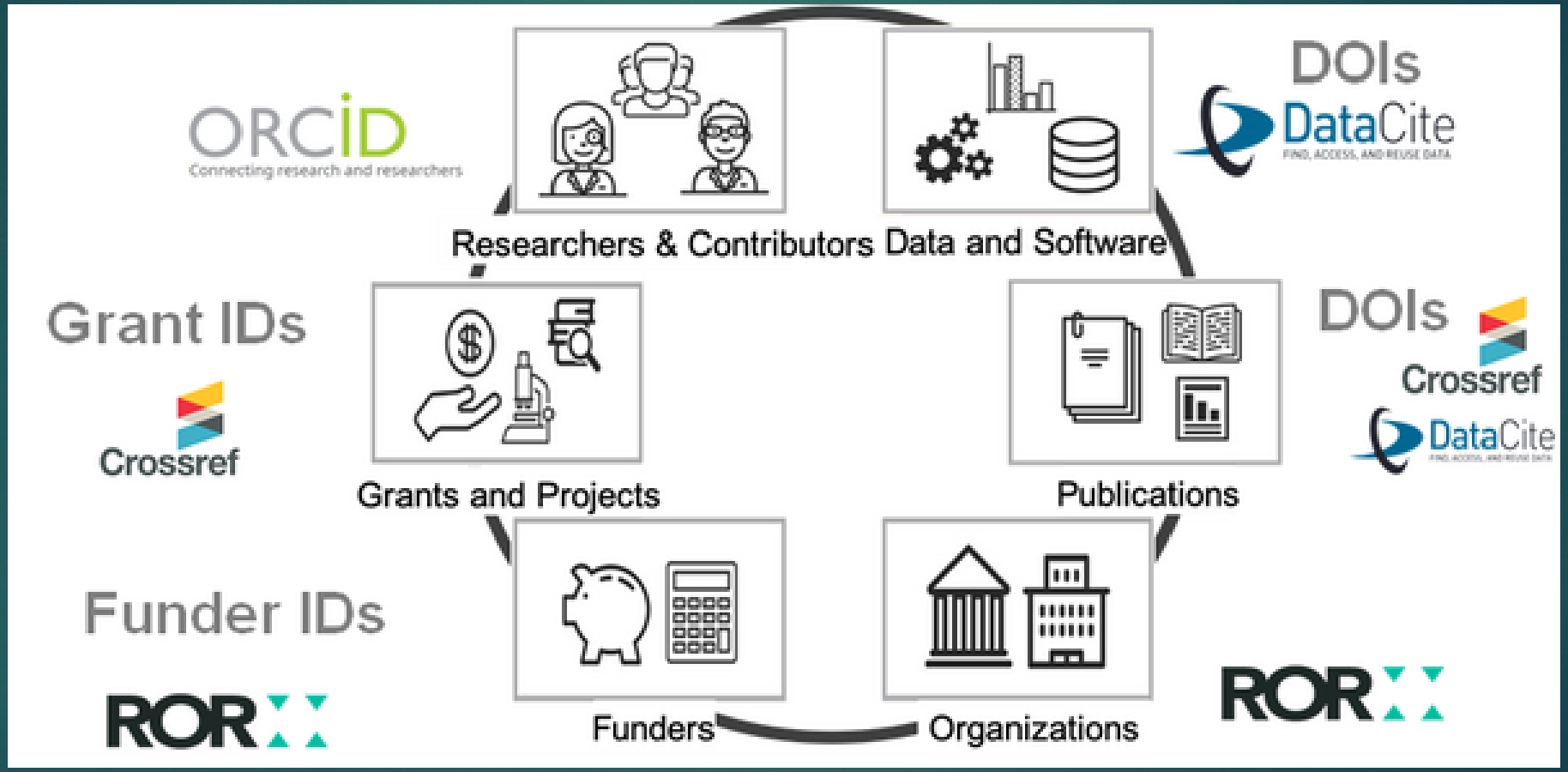
- NIH Data Management & Sharing
  - January 2023 : public comment support for use of PIDs
  - Budget, Plan, Share (Comply)
- OSTP Guidance Aug 2022
  - All agencies that fund R&S implement policies by December 2025
  - DPI included in the minimum metadata for scholarly publications & data
- This isn't 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

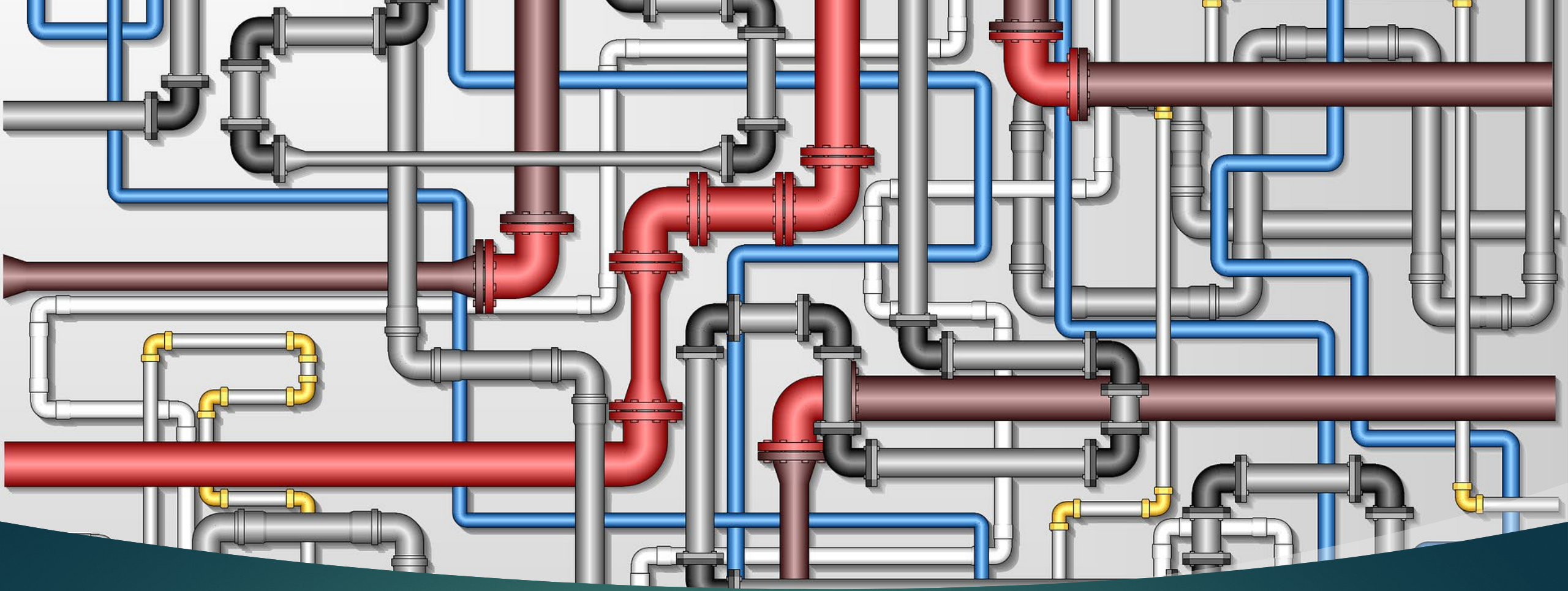
Why DPIs matter

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)

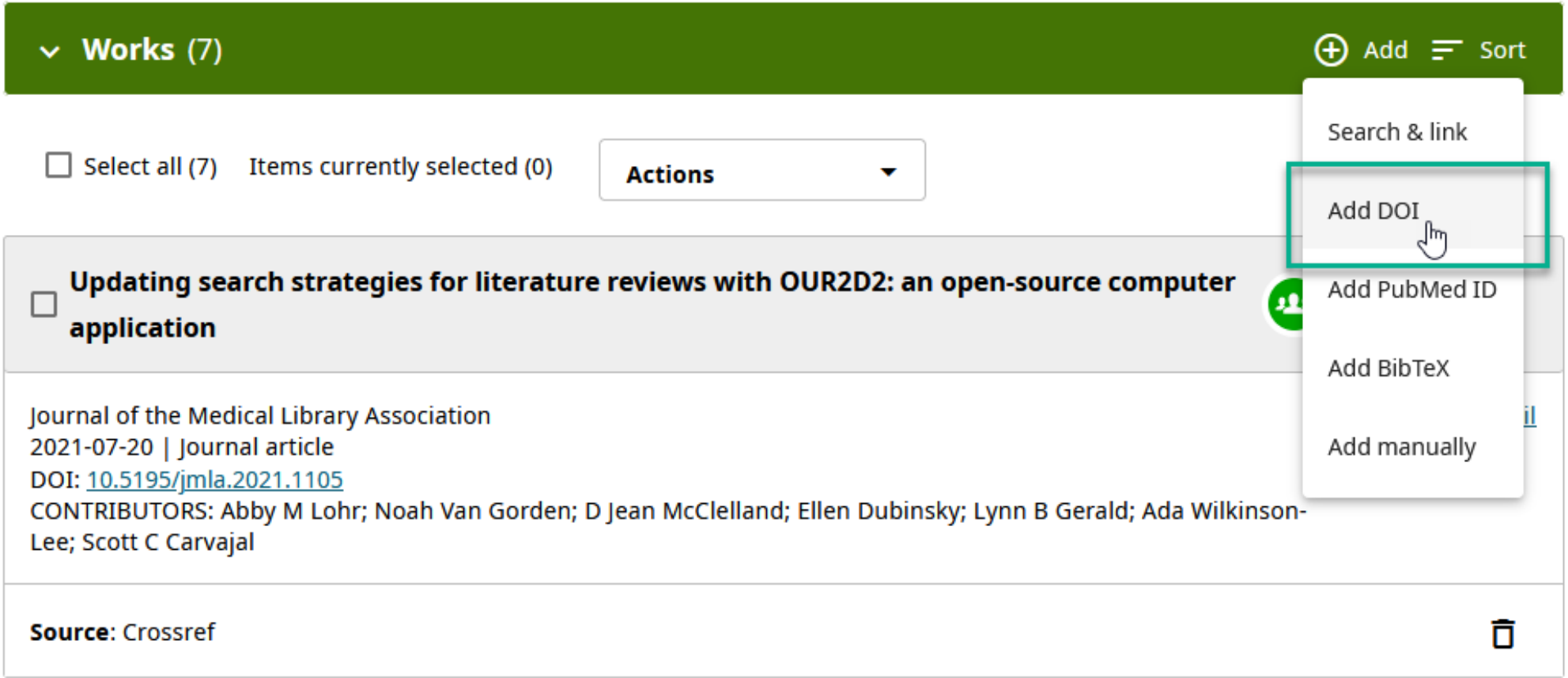
How DPIs work

- 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



DPIs in Action

The Antibody Registry

Home About Search Add Login/Register

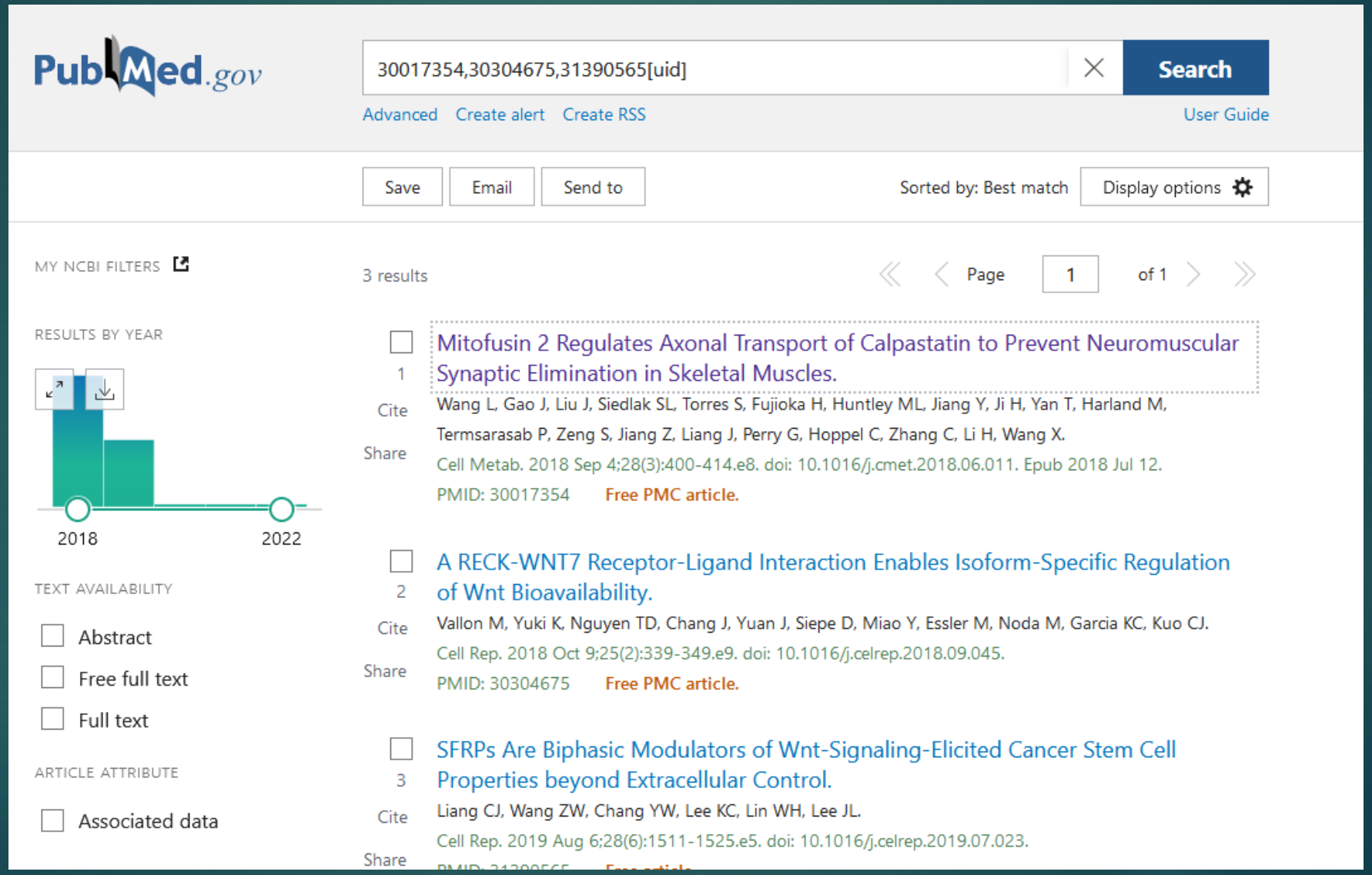
AB_2215411

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.

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

DPI Benefits



DPI Examples

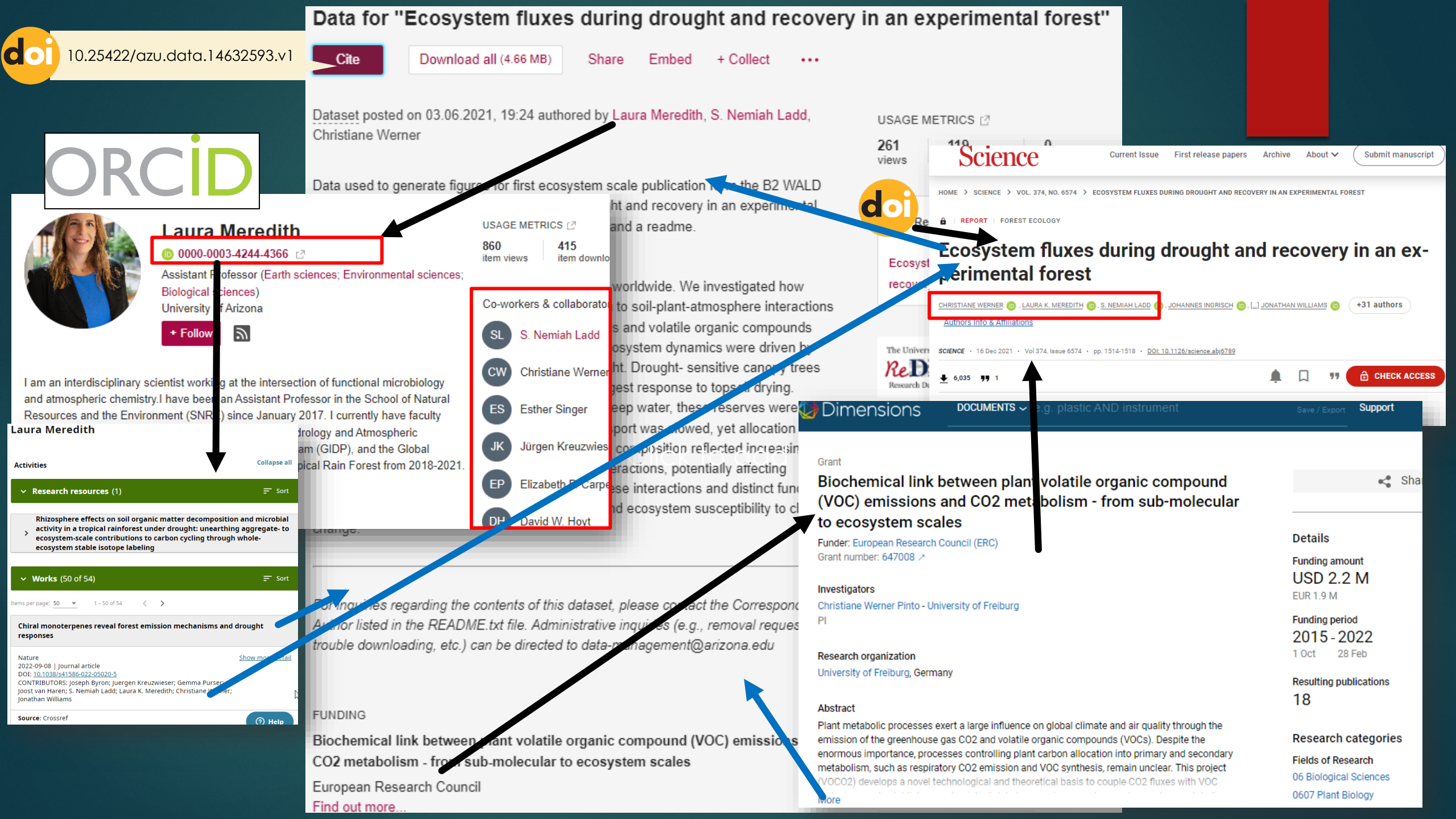
DPI Benefits – Data Management & Sharing

- 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


10.25422/azu.data.14632593.v1
Data for "Ecosystem fluxes during drought and recovery in an experimental forest"
Cite
Download all (4.66 MB)
Share
Embed
+ Collect
Dataset posted on 03.06.2021, 19:24 authored by Laura Meredith, S. Nemiah Ladd, Christiane Werner
Data used to generate figures for first ecosystem scale publication from the B2 WALD
and a readme.
USAGE METRICS
261
views
ORCID
Laura Meredith
0000-0003-4244-4366
Assistant Professor (Earth sciences; Environmental sciences; Biological sciences)
University of Arizona
+ Follow
I am an interdisciplinary scientist working at the intersection of functional microbiology and atmospheric chemistry.I have been an Assistant Professor in the School of Natural Resources and the Environment (SNRE) since January 2017. I currently have faculty
Laura Meredith
Activities
Collapse all
Research resources (1)
Sort
Rhizosphere effects on soil organic matter decomposition and microbial activity in a tropical rainforest under drought: unearthing aggregate- to ecosystem-scale contributions to carbon cycling through whole-ecosystem stable isotope labeling
Works (50 of 54)
Sort
Chiral monoterpenes reveal forest emission mechanisms and drought responses
Nature
2022-09-08 | Journal article
DOI: 10.1038/s41586-022-05020-5
Source: Crossref
USAGE METRICS
860
item views
415
item downlo
Co-workers & collaborators
S. Nemiah Ladd
Christiane Werner
Esther Singer
Jürgen Kreuzwies
Elizabeth P. Carpe
David W. Hoyt
worldwide. We investigated how
to soil-plant-atmosphere interactions
and volatile organic compounds
ecosystem dynamics were driven by
ht. Drought- sensitive canopy trees
gest response to topsoil drying.
eep water, these reserves were
port was slowed, yet allocation
composition reflected increasin
eractions, potentially affecting
se interactions and distinct fun
d ecosystem susceptibility to cl
For inquiries regarding the contents of this dataset, please contact the Correspond
Author listed in the README.txt file. Administrative inquiries (e.g., removal reques
trouble downloading, etc.) can be directed to data-management@arizona.edu
FUNDING
Biochemical link between plant volatile organic compound (VOC) emissions
CO2 metabolism - from sub-molecular to ecosystem scales
European Research Council
Find out more...
Science
Current Issue
First release papers
Archive
About
Submit manuscript
HOME > SCIENCE > VOL. 374, NO. 6574 > ECOSYSTEM FLUXES DURING DROUGHT AND RECOVERY IN AN EXPERIMENTAL FOREST
REPORT | FOREST ECOLOGY
Ecosystem fluxes during drought and recovery in an experimental forest
CHRISTIANE WERNER, LAURA K. MEREDITH, S. NEMIAH LADD, JOHANNES INGRISCH, [...] JONATHAN WILLIAMS
+31 authors
Authors Info & Affiliations
SCIENCE · 16 Dec 2021 · Vol 374, Issue 6574 · pp. 1514-1518 · DOI: 10.1126/science.abj6789
6,035
1
CHECK ACCESS
Dimensions
DOCUMENTS
e.g. plastic AND instrument
Save / Export
Support
Grant
Biochemical link between plant volatile organic compound (VOC) emissions and CO2 metabolism - from sub-molecular to ecosystem scales
Funder: European Research Council (ERC)
Grant number: 647008
Investigators
Christiane Werner Pinto - University of Freiburg
PI
Research organization
University of Freiburg, Germany
Abstract
Plant metabolic processes exert a large influence on global climate and air quality through the emission of the greenhouse gas CO2 and volatile organic compounds (VOCs). Despite the enormous importance, processes controlling plant carbon allocation into primary and secondary metabolism, such as respiratory CO2 emission and VOC synthesis, remain unclear. This project (VOCO2) develops a novel technological and theoretical basis to couple CO2 fluxes with VOC
More
Details
Funding amount
USD 2.2 M
EUR 1.9 M
Funding period
2015 - 2022
1 Oct
28 Feb
Resulting publications
18
Research categories
Fields of Research
06 Biological Sciences
0607 Plant Biology

DPI Benefits – Data Management Plans (DMPs)

- 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

10.48321/D1BK5T

A data management plan for this project [illegible]mitted to the National Institutes of Health (NIH) with the information below.

This page represents key information from a data management plan available here.

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/0000-0003-4661-0296
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 Sharp: 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)
Funding opportunity number: PAR-18-018
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

SciENcv

Create a New Document

Document name

Enter a name to help you to identify this document

Format

- (•) NIH Biosketch
- ( ) NIH Fellowship Biosketch
- ( ) NSF Biosketch
- ( ) NSF Current and Pending Support
- ( ) IES Biosketch

Select a format for this document

Choose data source

- (•) Start with a blank document
- ( ) Existing Document: Sample NIH biosketch
- ( ) External source: eRA Commons

You must link to an eRA Commons account to use this option.
Documentation on how to link an external account is available here.

Profile name: Lori Sample for COGR [Edit] **Download:** PDF

Profile type: PAPPG Chapter II (nsf.gov) NSF Biographical Sketch Instructions

Last Updated: 20 September 2022

Sharing: Private [Change]

OMB-3145-

NAME [Edit]
Schultz, Lori Ann

ORCID iD
http://orcid.org/0000-0002-1597-8189

A. PROFESSIONAL PREPARATION -(see PAPPG Chapter II.C.2.f.(a)) [Edit entries]

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

INSTITUTION	LOCATION	MAJOR/AREA OF STUDY	DEGREE (if applicable)	YEAR
University of Arizona	Tucson, Arizona, US	Accounting	Master of Accounting	2011
University of Arizona	Tucson, AZ, US	Political Science	Bachelor of Arts	1994