To: NIH Office of Science Policy

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RE: Comments on NIH Plan to Increase Findability and Transparency of Research Results Through the Use of Metadata and Persistent Identifiers (PID) - NOT-OD-25-050
Submitted by online form

The Association of Public and Land-grant Universities (APLU), the Association of Research Libraries (ARL), the Association of American Universities (AAU), and COGR appreciate NIH's commitment to increasing findability and transparency of research outputs through metadata and persistent identifiers (PIDs). This plan represents an important step toward creating an interconnected knowledge network that will accelerate scientific discovery, enhance research security, and maximize the impact of federal research investments.

Our associations strongly support NIH's vision for standardizing metadata and PIDs. The research community has already made significant progress in establishing best practices for PIDs. In 2019, a National Science Foundation-sponsored conference convened by APLU, ARL, and other partners produced recommendations for adopting core PIDs, including Digital Object Identifiers (DOIs), ORCID iDs, and Research Organization Registry (ROR) IDs.[1] This framework provides a foundation for the knowledge network NIH envisions.

While supporting the plan's direction, we recommend the following refinements to ensure successful implementation.

Ensuring Trusted and Interconnected PID Infrastructure

The open PID infrastructure represents a core community asset that requires sustained financial and operational support. As NIH mandates ORCID usage and supports the use of ROR, we recommend specific actions to strengthen and maintain these critical research infrastructures.

We recommend that NIH establish and maintain automated systems that write publication and data output metadata from PubMed Central and other NIH-supported repositories directly to

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[1] Chodacki, John, Cynthia Hudson-Vitale, Natalie Meyers, Jennifer Muilenburg, Maria Praetzellis, Kacy Redd, Judy Ruttenberg, Katie Steen, Joel Cutcher-Gershenfeld, and Maria Gould. *Implementing Effective Data Practices: Stakeholder Recommendations for Collaborative Research Support*. Washington, DC: Association of Research Libraries, September 2020. https://doi.org/10.29242/report.effectivedatapractices2020.

researchers' ORCID profiles. This bidirectional integration would enable NIH systems to both read from ORCID profiles and automatically update them when new public research outputs are deposited. Such automation improves data accuracy and demonstrates NIH's commitment to enriching the scholarly record.

Building on this infrastructure, NIH should convene federal funding agencies, publishers, institutions, and repositories to promote systems and practices for maintaining ORCID profiles with trusted, authoritative information. This coordinated approach would help create an interconnected PID ecosystem that strengthens research security through better visibility of research relationships and funding sources, while reducing the burden on researchers.

We appreciate NIH's movement towards an ideal PID landscape in U.S. research, which would be a fully interoperable and widely adopted system where researchers, datasets, publications, institutions, and funding sources are seamlessly connected through standardized, open PIDs like ORCID, DOI, and ROR. This would enhance research integrity, reproducibility, and accessibility while reducing administrative burden, ensuring long-term discoverability of scholarly outputs, and enhancing research security.

Reducing Institutional and Researcher Burden while Enhancing Research Security

We strongly support the adoption of PIDs, and we recommend refining the implementation approach regarding institutional oversight. The current plan states that NIH expects "institutions to ensure all authors who are named senior and key personnel use ORCID iDs when submitting manuscripts." This expectation is not aligned with established institutional roles and responsibilities and would create a significant administrative burden.

Institutions lack the mechanisms to monitor real-time manuscript submissions to journals and repositories. For example, when researchers from multiple institutions collaborate on NIH-funded research, no single institution has visibility into all submission activities. A paper might be submitted by a co-author at another institution without advance notice to the primary institution. Additionally, institutions would need to create new tracking systems and staffing to monitor thousands of annual submissions across hundreds of journals and repositories - a costly and inefficient approach. Creating systems to track compliance at the institutional level could also have the effect of being perceived as a barrier to publishing and academic freedom.

These institutional oversight challenges extend beyond manuscript submissions. The plan includes multiple expectations for institutions to ensure ORCID iD usage and metadata submission across various research outputs. For example, institutions are expected to ensure metadata submissions for scientific data include ORCID iDs, affiliations, and funding sources for all key personnel. As with manuscript submissions, institutions often lack visibility and control over researcher interactions with third-party systems, making such oversight impractical.

While the administrative burden concerns are significant, it is important to note that a well-implemented PID system serves broader national interests. The NSPM-33 Implementation Guidance specifically identifies PIDs as a crucial tool for research security, enabling transparent documentation of research relationships and collaborations. An automated, system-based

approach to PID implementation would both reduce administrative burden and better achieve these research security objectives compared to institution-by-institution monitoring.

Under NIH guidelines, institutions, through their Authorized Organizational Representatives (AORs), certify compliance with award terms and conditions, while Program Directors/Principal Investigators (PD/PIs) are responsible for the proper conduct of research activities, including publication submissions.

Instead of requiring institutional monitoring of individual manuscript submissions, we recommend NIH:

- Build ORCID iD requirements into existing manuscript submission systems (i.e., PubMed Central), as applicable by law
- Allow PD/PIs to certify compliance through standard progress reports
- Maintain institutional responsibility at the policy and certification level rather than individual transaction monitoring

This approach achieves increased PID adoption while preserving established administrative structures and avoiding unsustainable oversight burdens on institutions.

We stand ready to work with NIH to develop a robust, trusted, and impactful PID infrastructure. This will allow us to better track research outcomes and impacts, strengthen research security, and accelerate science as research outputs become easier to find and reuse.