

LAYING THE FOUNDATIONS FOR FAIR-ER SCIENCE: ISA AND LSDA DATA SUBMISSION PROCESS IN NASA'S EVOLVING DATA MANAGEMENT ENVIRONMENT

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The Life Sciences Data Archive (LSDA) archives data resulting from research on the effects of spaceflight on humans and the development of countermeasures to mitigate spaceflight hazards. Archivists work with researchers to ensure that unique and high value data products and their metadata are preserved and managed to support current and future research. Currently, LSDA is updating its procedures and data submission requirements in response to the evolving data preservation environment at NASA. LSDA is implementing best practices for research data management through the establishment of clear data submission guidelines, integration of the FAIR (Findability, Accessibility, Interoperability, Reusability) principles, and use of the ISA (Investigation, Study, Assay) research metadata framework for data discoverability and transparency into the data management processes.

These changes directly impact LSDA's requirements for research data submissions. The newly revised Research Data Submission Agreement (RDSA), formerly the Data Submission Agreement (DSA), introduces ISA-compatible metadata collection standards to LSDA's process. Adherence to LSDA's data submission guidelines enhances the FAIR-ness of the repository's collections for future users. This presentation will discuss (1) how submission of research data and associated metadata are impacted by current data management policies, (2) benefits of the adoption of FAIR principles and the ISA metadata framework for retrospective studies utilizing existing LSDA datasets and historic data collections, and (3) the support LSDA will provide to researchers during this transition.