

Faculty of Medicine, Nursing & Health Sciences

Guidelines for the use of LabArchives

AN ELECTRONIC LABORATORY NOTEBOOK FOR RESEARCH

These guidelines serve to provide researchers, students and staff with a set of standards on best practices for research data management when using LabArchives simply and effectively.

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1. INTRODUCTION

Electronic Laboratory Notebooks (ELN) are secure digital platforms designed to replace traditional paper research notebooks. They are used to create, document, organise, manage, share, collaborate and securely store research data. ELN is essentially a form of electronic records and promotes good research practices, data security and lowers the risk of research misconduct. *LabArchives is currently Monash University's supported ELN platform and can be used for all types of research, whether quantitative or qualitative in nature.*

2. BEST NOTEBOOK PRACTICES

LabArchives should be used to record data and notes from the beginning of a study all the way through to publication and ultimately for archiving the data (see Figure 1). LabArchives is compatible with the University's legal, regulatory, quality-control and retention requirements for record-keeping and data management. Your School or Institutions' policies and guidelines on best practices on managing a paper research notebook should be applied to the use and maintenance of LabArchives.

2.1. DATA MANAGEMENT AND RECORD KEEPING

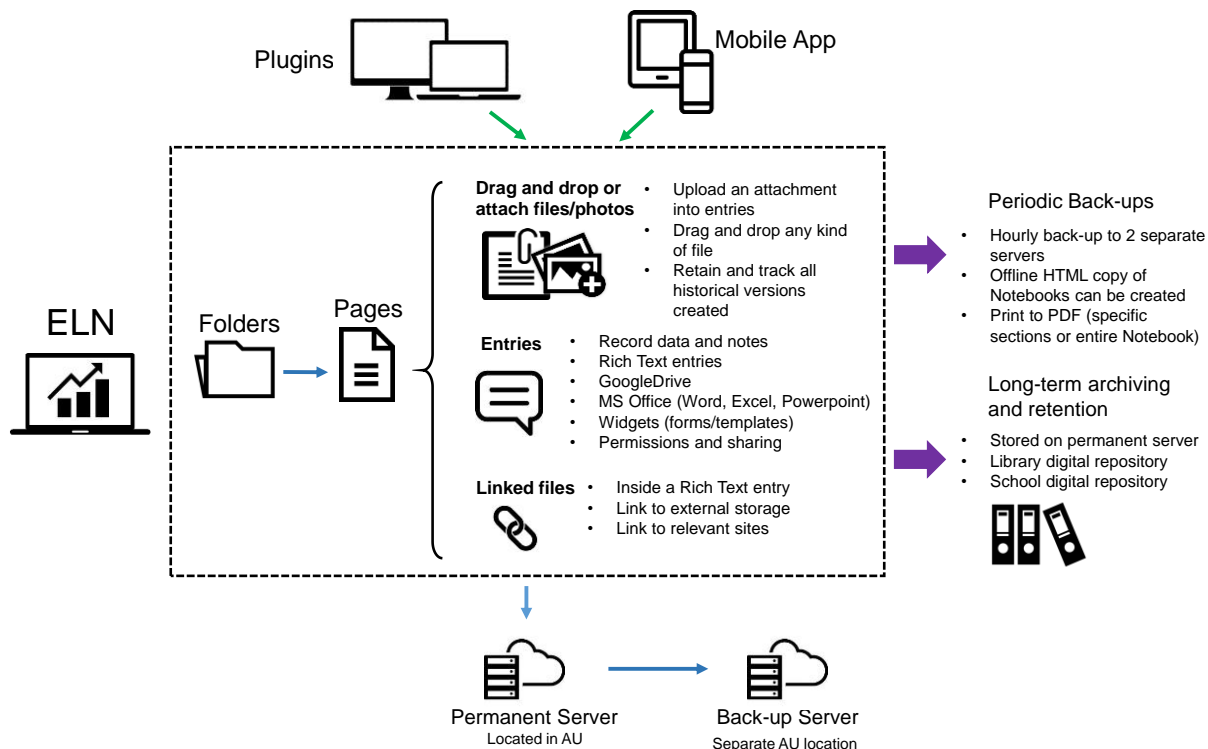
Data management and documentation is an important part of the responsible conduct of research. Data that you create, record, compile or collect during your research is a valuable asset that needs to be preserved over long periods of time. To optimise research outcomes, data must be stored, retained, documented and/or described, made accessible for use and reuse by other researchers, and/or disposed of, according to legal, statutory, ethical and funding bodies' requirements.

LabArchives provide researchers with complete historical versions of all the research data recorded from study designs to data management and record of meeting notes. All data entered into LabArchives is time-stamped and identifiable by the person who entered the data. Data is not able to be deleted once documented and saved into LabArchives. This feature provides protection of the University's invention and [Intellectual Property](#) and enables the Notebook to be highly auditable. All data management such as ownership, ethics and data retention must be well-documented by researchers in order to comply with Institutional requirements and [The Australian Code for Responsible Conduct of Research](#), released by the Australian Research Council (ARC) and the National Health and Medical Research Council (NHMRC) in 2007.

- Please refer to Monash University's [Research Data Management Policy](#) and [Managing Research Data policy](#) for more information on responsible data planning and management.

- Please refer to the NHMRC [Principles for accessing and using publicly funded data for health research](#) guidelines for information and guidance on expectations when researchers seek permission from organisations to access and use data for their research.

Figure 1: Data management workflow in an LabArchives Electronic Laboratory Notebook



When a project is complete, research groups are also encouraged to make this data publicly available, subject to ethical, commercial or contractual requirements. The University provides [monash.figshare](#) for this purpose. monash.figshare can also generate Digital Object Identifiers (DOI) to allow for persistent links to the data, and to allow for ongoing citation and credit for shared data.

See <http://www.monash.edu/library/researchdata/figshare> for more information.

2.2. SECURE STORAGE

LabArchives is a form of [Cloud Storage](#). LabArchives has been cleared by Monash Security as safe for the storage of research data that are critical, confidential, or otherwise sensitive in nature, such as clinical data (refer to [Electronic Information Security: Responsibilities, Classifications and Standards Procedures](#)). LabArchives is hosted on cloud servers located in a secure, primary data centre in New South Wales (Australia), with a separate disaster recovery data centre in a different location in New

South Wales. Please refer to [LabArchives Security](#) for further information on security and safety.

2.3. RETENTION AND ARCHIVING

Depositing data in a repository or archive is one way of ensuring your data can be accessed and cited in the long-term, and may be a requirement of funders or when publishing your research. Unlike paper notebooks, that are element-sensitive, LabArchives is a long-lasting digital file that can be stored and archived permanently at both the School and University level. LabArchives meets the digital storage criteria outlined under [Durable formats](#) guidelines.

- Please refer to the [Retention](#) guidelines for information on minimum, long-term and permanent retention periods for data.
- Please refer to the [Sharing and disseminating data](#) guidelines for information on archiving and digital data repositories hosted at Monash University.

3. RECOMMENDED USES FOR LABARCHIVES

LabArchives is not limited to storing research data and records. The capability of LabArchives can be used for a number of features that form part of the research environment, including but not limited to:

- Aims and hypotheses
- Study design/plan and outlines
- Study protocols
- Publication drafts
- Presentations and posters
- Relevant papers and articles for sharing
- Supervisor-student, research group and collaboration meeting notes
- Ethics documentation and approval
- Standard Operating Procedures (SOPs)
- Material Safety Data Sheets (MSDS)
- Occupational Health and Safety (OHS) information
- Google Calendar
- Group inventory and stock levels
- For students – milestones and progress reports, thesis drafts and copies

Research groups and staff are encouraged to expand the use of LabArchives for:

- Committees – agendas, minutes and related documents
- Conferences – notes, abstracts, posters and presentations to be shared
- Journal clubs – papers and discussions, meeting times (i.e., Google Calendar widget)
- Disseminating information to a group – research seminars information and presentations
- Virtual teaching and training space – create a central and accessible space to upload training materials for students, information from School inductions

4. IMPORTANT CONSIDERATIONS

4.1. AGREEMENTS WITH EXTERNAL ORGANISATIONS

Prior to using LabArchives, researchers that are engaged in any research partnerships with external organisations or using records generated by external organisations, should review their legal agreements or contracts before adding any data and records to LabArchives. Some external organisations do not allow the storage of data or records in a cloud-based storage platform. If this is the case for your research then you can still use LabArchives but provide links to point to where this research data is stored (e.g., web page).

Considerations for external parties can include the following:

- Industry agreements;
- Commercial agreements;
- Multi-institutional agreements;
- Government agencies' databases;
- Material accessed via library proprietary resources (such as journal articles and commercial database records).

Please ensure that agreements are reviewed as a breach in legal/confidentiality agreements can result in serious consequences. If you have any questions or concerns, please seek legal advice from the Monash Office of the General Counsel.

4.2. CONSIDERATIONS FOR SENSITIVE DATA

Sensitive and critical data (e.g., participant data) is safe when stored on LabArchives. For concerned researchers working with new, junior or inexperienced staff and students, records with participant-identifiable information can be stored via other data storages means (i.e. local back-up S-Drive, locked filing cabinet). The coded participant information can then be stored on LabArchives with links to point to the identifiable information stored in other data management systems. If you have any questions or concerns, please consult further with the Faculty.

4.3. CONSIDERATIONS FOR LARGE DATA SETS

LabArchives is not recommended for storing extremely large data sets (e.g., imaging data) as it is cloud-based storage. When retrieving a large file, it requires being downloaded and can be time-consuming. Large data storage such as the local S-Drive, [My Tardis](#) or [MASSIVE](#) can be used to store large data sets and have links to point from LabArchives to these large data storage sets. Please refer to [Digital Storage Options at Monash](#) and consult with the [Monash eResearch Centre](#) for large data storage options.

4.4. RESEARCH INTEGRITY AND RISK MANAGEMENT

LabArchives improve research management and efficiency, however they do not replace good management and supervision of staff and students. To lower the risk of [Research Misconduct](#), please consider the following:

- All data should be recorded, handled and stored in a way that allows accurate reporting, interpretation and verification;
- Assign appropriately trained and experienced individuals to ensure diligent supervision and monitoring of research projects. Avoid a heavy reliance on relatively junior or inexperienced staff and students to supervise complex projects and to analyse critical research results;
- Check data, documentation and records of studies regularly;
- Ensure that all study protocols and essential documentation (i.e., Standard Operating Procedures (SOPs), ethics documentation etc.) are up-to-date and available to the research group to promote high-quality research practices; and
- Ensure suitable back-up processes are in place at all times.

4.5. STORING PERSONAL MATERIAL

LabArchives is designed to retain every historical version of the data, records and documents, and once saved to the cloud, they cannot be deleted. LabArchives users should treat this with caution when storing their personal materials or activities on LabArchives, as they cannot be removed. Inappropriate use of LabArchives and storage of inappropriate personal material (i.e. illicit material etc.) may result in serious consequences. The Monash Team Leader of each research group is responsible for ensuring that the [Acceptable Use Policy](#) is adhered to by all members of the group. Publication of information, information access controls, group membership controls are the responsibility of the Team Leader. Please review the section *Prohibited use of Information Technology Resources and Possible Consequences* under the [Information Technology Use Policy – Staff and Other Authorised Users](#).

5. GENERAL INFORMATION

5.1. LABARCHIVES OWNERSHIP

The creator of the LabArchives Notebook has ownership of any data, records and documents in the Notebook. Ownership of the Notebook gives control to the owner of the Notebook. Heads of Laboratory or Principal Investigators are recommended to create the Notebook and give access to research staff and students to use the Notebook. Please refer to [LabArchives User Management](#) to understand the different types of Users and their access privileges. Notebook Ownership is not to be confused with Intellectual Property (IP) ownership (please refer to 5.2 Intellectual property).

5.2. INTELLECTUAL PROPERTY

The current Monash Intellectual Property policies cover LabArchives. LabArchives is a form of digital data, and although the form of the data storage and documentation has changed (from paper to digital), the IP does not.

5.3. ETHICS APPROVAL

It is important to note that the Monash University Animal Research Ethics Committee do not require any amendments to be made to Ethics documentation with regards to the storage of your data and records in LabArchives. However the Monash University Human Research Ethics (MUHREC) strongly encourage researchers to review their approved documentation, and ensure that the appropriate amendments to their human ethics approval are made if required.

5.4. STAFF DEPARTURE

When a staff member or student departs from the University, control of the LabArchives Notebook will remain with the research group under supervision of the appropriate researcher. They may take a copy of Notebook subject to the Head of the Research Group's and University's approval.

If the owner of the LabArchives Notebook or Head of the Research Group is departing the University, the exit procedures that are in place for relocating digital data and information will also apply to the Notebook.

If a study is complete or retired, the LabArchives Notebook will be archived at School and University level to comply with Retention of Research Data policies. Schools and research groups are encouraged to include a handover process or agreement to take a copy of the LabArchives Notebook in the exit procedures.