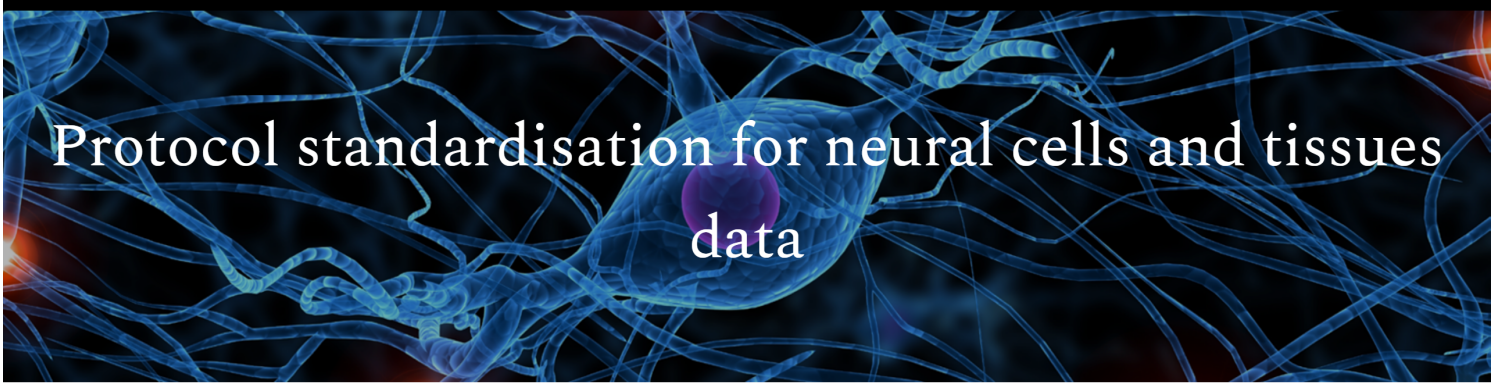

Protocol standardisation for neural cells and tissues data

Creating the design architecture of a secure, public, cloud-based storage system.

This project will review and provide information on approaches to standardisation of protocols for collecting linked images and electrophysiological data from in vitro and in vivo studies on neural cells and tissues.

Its foundational activities and engagement will focus on:

1. Identifying the key open databases for sharing images and electrophysiological information
2. Determining how users interact with these databases, including any standardisation protocols
3. Identifying the key needs for improving standardisation of neural data collection
4. Determining how we can best support more effective accessibility and sharing of neural data
5. Discovering what types of platforms could we use to support "data interoperability"
6. Mechanisms to be put in place for secondary use of research data to ensure privacy and security of data.

Start date

3 June 2019

Expected completion date

21 October 2019

Investment by ARDC

$49,999

Co-investment partners

University of New South Wales

University of Wollongong

University of Melbourne

Swinburne University

Lead node

UNSW AUSTRALIA

1. Technical Report

A review of currently available databases and their use by key groups worldwide will be conducted. Included in this will be an evaluation of current standardisation approaches.

2. Workshop Report

A report on international data standardisation recommendations for neural imaging and electrophysiology will be prepared and distributed.

3. Completion of projects

Project outcomes will be presented at an ARDC Infrastructure Summit in October 2019.

Core features

Review of current approaches

A summary of current national and international approaches.

International Workshop

Global input into standardisation requirements.

Presentation of outcomes

Communication of recommendations generated from the project.

Who is this project for?

- Research organisations
- Peak bodies

What does this project enable?

This project will provide essential input into the development of a design architecture of secure, public, cloud-based storage systems. These systems will leverage data from multiple sources and facilitates, and provide data access and interoperability using standard health messaging – Fast Healthcare Interoperability Resources (FHIR). The project will also contribute to the development of sustainable infrastructure to support a range of collections and provide input to the development of the Australian Brain Data Commons, which will play a key role in ongoing work in this space.

Handy resources

- Final Report [PDF 105KB]
- FAIR Assessment [PDF 123KB]
- Presentation [PDF 543KB]
- PhysioNet
- Neurodata Without Borders (NWB)

University of New South Wales

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University of Wollongong

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University of Melbourne

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The Australian Research Data Commons is enabled by NCRIS.

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