Studying the structural determinant of Tau seeding

A Data Management Plan created using DMPonline.be

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Project abstract:

The accumulated evidence supports that distinct tau polymorphs, generated in unique cellular milieus and transmitted in interconnected brain areas, may underlie the heterogeneity observed in the clinical outcome and pathology progression in different Alzheimer's disease (AD) cases. Cryo-EM has undoubtedly resulted in a breakthrough in the field by determining the structures of tau fibrils at atomic resolution, but this approach is limited to extracted end-state fibrillar aggregates. The early stages of AD (especially the structural analysis of the early-forming non-fibrillar tau species) have been neglected so far. I will utilize an innovative approach, atomic-force microscopy-based infrared absorption (AFM-IR) coupled with fluorescence microscopy. I will obtain in situ structural information of the transient and heterogeneous conformational changes occurring during tau aggregation as well as investigate interactions with other proteins, lipids, and nucleic acids that may potentially act as co-aggregators. I will thoroughly screen the structural characteristics of tau amyloid strains in situ, starting from the early stages of pathology/disease both in human cases and mouse models. I will correlate the identified structural properties of tau aggregates with both their maturation state and seeding potential. My findings will deepen our understanding of how the distinct tau strains are formed and relate to the characteristic spreading patterns of tau neuropathology.

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Studying the structural determinant of Tau seeding
Application DMP

Questionnaire

Describe the datatypes (surveys, sequences, manuscripts, objects …) the research will collect and/or generate and /or (re)use. (use up to 700 characters)

1. Experimental data: Digital images (fluorescent, electron microscopy, atomic force microscopy)
2. Derived and compiled data: Research documentation (text, spreadsheets, protocols, notes and diaries), Manuscripts, Algorithms and scripts
3. Development of biological databases: spectroscopic/morphologic signatures related to
conformational diseases
4. Canonical data: Nucleic acid sequences, Protein sequences, Peptide sequence, Protein structures

Specify in which way the following provisions are in place in order to preserve the data during and at least 5 years after the end of the research? Motivate your answer. (use up to 700 characters)

1. Designation of the responsible person (If already designated, please fill in his/her name.)
Alexander Botzki is responsible for E-Notebook, Frederic Rousseau and Hannah Wilkinson are responsible for other datatypes.
2. Storage capacity/repository

- during the research
- after the research

Research documentation and processed data will be stored in E-Notebook and in DropBox (storage capacity of 2 TB and 25 TB, respectively) and on KU Leuven servers, with regular backups. Stored data will be available for at least 5 years. Manuscripts will be published and archived in public repositories. DB of multivariate spectroscopic/morphologic signatures will be publicly available. Nucleic acids and protein samples will be stored at -80°C.

What's the reason why you wish to deviate from the principle of preservation of data and of the minimum preservation term of 5 years? (max. 700 characters)

No plans to deviate.

Are there issues concerning research data indicated in the ethics questionnaire of this application form? Which specific security measures do those data require? (use up to 700 characters)

Not applicable

Which other issues related to the data management are relevant to mention? (use up to 700 characters)

Not applicable

Studying the structural determinant of Tau seeding
DPIA

DPIA

Have you performed a DPIA for the personal data processing activities for this project?

- Not applicable

Studying the structural determinant of Tau seeding
GDPR

GDPR

Have you registered personal data processing activities for this project?

- Not applicable

Studying the structural determinant of Tau seeding
FWO DMP (Flemish Standard DMP)

1. Research Data Summary

List and describe all datasets or research materials that you plan to generate/collect or reuse during your research project. For each dataset or data type (observational, experimental etc.), provide a short name & description (sufficient for yourself to know what data it is about), indicate whether the data are newly generated/collected or reused, digital or physical, also indicate the type of the data (the kind of content), its technical format (file extension), and an estimate of the upper limit of the volume of the data.

				Only for digital data	Only for digital data	Only for digital data	Only for physical data		
Dataset Name	Description	New or reused	Digital or Physical	Digital Data Type	Digital Data format	Digital data volume (MB/GB/TB)	Physical volume		
		Please choose from the following options: • Generate new data • Reuse existing data	*Please choose from the following options:* • Digital • Physical	*Please choose from the following options:* • Observational • Experimental • Compiled/aggregated data • Simulation data • Software • Other • NA	*Please choose from the following options:* • .por, .xml, .tab, .cvs,.pdf, .txt, .rtf, .dwg, .gml, … • NA	*Please choose from the following options:* • <100MB • <1GB • <100GB • <1TB • <5TB • <10TB • <50TB • >50TB • NA			
Neuropathology of the human cases	Use of post-mortem human tissue in different stages of pathology	Reuse Existing data (Laboratory of Neuropathology)	Digital	Compiled/aggregated data	Text files: Rich Text Format (.rtf), plain text data (Unicode, .txt), MS Word (.doc/.docx), eXtensible Markup Language (.xml), Adobe Portable Document Format (.pdf), LaTex (.tex) format;	<100MB			
Human brain tissue sections	immunohistochemical, immunofluorescent staining	Reuse Existing Data (Biobank)	Physical	Experimental			100 sections	Biological and chemical samples: live animals, frozen samples in cryovials, samples stored at 4°C.	
Microscope images of stained tissue sections	study of tau aggregation in the human brain tissue	Generate new data	Digital	Experimental	Digital images in raster formats: uncompressed TIFF (.tif/.tiff), JPEG (.jpg), JPEG 2000 (.jp2), Adobe Portable Document Format (.pdf), bitmap (.bmp), .gif;	<100GB			
AFM images with AFM-IR	morphological analysis of tau aggregates in human brain tissue	Generate new data	Digital	Experimental	Digital images in raster formats: uncompressed TIFF (.tif/.tiff), JPEG (.jpg), JPEG 2000 (.jp2), Adobe Portable Document Format (.pdf), bitmap (.bmp), .gif;	<100GB			
AFM-IR spectroscopy data	structural analysis of tau aggregates in human brain tissue	Generate new data	Digital	Experimental	Quantitative tabular data: comma-separated value files (.csv), tab-delimited file (.tab), delimited text (.txt), MS Excel (.xls/.xlsx), MS Access (.mdb/.accdb);	<100MB			
IR imaging data with AFM-IR	structural analysis of tau aggregates in human brain tissue	Generate new data	Digital	Experimental	Digital images in raster formats: uncompressed TIFF (.tif/.tiff), JPEG (.jpg), JPEG 2000 (.jp2), Adobe Portable Document Format (.pdf), bitmap (.bmp), .gif;	<100GB			
Tau RD P301S FRET Biosensor cell line (ATCC CRL-3275)	reporter cell line for high-content imaging cellular assays	Reuse existing data	Physical	Experimental			10 vials	Biological and chemical samples: live animals, frozen samples in cryovials, and samples stored at 4°C.	
Human brain tissue	Extraction of Human Tau aggregates	Reuse existing Data (Biobank)	Physical	Experimental			15 vials	Biological and chemical samples: live animals, frozen samples in cryovials, samples stored at 4°C.	

Tau aggregates extraction from human brain tissue	determine the seeding efficiency of seeds made from human Tau aggregates	Generate new data	Physical	Experimental			15 vials	Biological and chemical samples: live animals, frozen samples in cryovials, samples stored at 4°C.	
ELISA in human tau homogenates	Determine Tau species concentration	Generate new data	Digital	Compiled/aggregated data	Text files: Rich Text Format (.rtf), plain text data (Unicode, .txt), MS Word (.doc/.docx), eXtensible Markup Language (.xml), Adobe Portable Document Format (.pdf), LaTex (.tex) format;	<100MB			
Seeds made from human tau aggregates	determine the seeding efficiency of seeds made from human Tau aggregates	Generate new data	Physical	Experimental			15 vials	Biological and chemical samples: live animals, frozen samples in cryovials, samples stored at 4°C.	
Microscope images from high-content screening	determine the seeding efficiency of seeds made from human Tau aggregates	Generate new data	Digital	Experimental	Digital images in raster formats: uncompressed TIFF (.tif/.tiff), JPEG (.jpg), JPEG 2000 (.jp2), Adobe Portable Document Format (.pdf), bitmap (.bmp), .gif;	<100GB			
Seeding dose-response curves	determine the seeding efficiency of seeds	Generate new data	Digital	Compiled/aggregated data	Quantitative tabular data: comma-separated value files (.csv), tab-delimited file (.tab), delimited text (.txt), MS Excel (.xls/.xlsx), MS Access (.mdb/.accdb);	<100MB	20	MB	
PS19 tau mouse line	a longitudinal study of tau aggregation in the PS19 mouse model	Reuse existing data	Physical	Experimental			1 colony	Biological and chemical samples: live animals, frozen samples in cryovials, samples stored at 4°C.	maintained in an animal house
PS19 tau mouse brains	a longitudinal study of tau aggregation in the PS19 mouse model	Generate new data	Physical	Experimental			20 vials	Biological and chemical samples: live animals, frozen samples in cryovials, samples stored at 4°C.	
Mouse brain tissue sections	immunohistochemical, immunofluorescent staining	Generate new data	Physical	Experimental			1000 sections	Biological and chemical samples: live animals, frozen samples in cryovials, samples stored at 4°C.	
Microscope images of stained tissue sections	a longitudinal study of tau aggregation in the PS19 mouse model	Generate new data	Digital	Experimental	Digital images in raster formats: uncompressed TIFF (.tif/.tiff), JPEG (.jpg), JPEG 2000 (.jp2), Adobe Portable Document Format (.pdf), bitmap (.bmp), .gif;	<100GB			
Quantitation results of aggregate size and frequency	a longitudinal study of tau aggregation in the PS19 mouse model	Generate new data	Digital	Compiled/aggregated data	Quantitative tabular data: comma-separated value files (.csv), tab-delimited file (.tab), delimited text (.txt), MS Excel (.xls/.xlsx), MS Access (.mdb/.accdb);	<100MB	10	KB	
AFM images with AFM-IR	morphological analysis of tau aggregates in mouse brain tissue	Generate new data	Digital	Experimental	Digital images in raster formats: uncompressed TIFF (.tif/.tiff), JPEG (.jpg), JPEG 2000 (.jp2), Adobe Portable Document Format (.pdf), bitmap (.bmp), .gif;	<100GB			
AFM-IR spectroscopy data	structural analysis of tau aggregates in mouse brain tissue	Generate new data	Digital	Experimental	Quantitative tabular data: comma-separated value files (.csv), tab-delimited file (.tab), delimited text (.txt), MS Excel (.xls/.xlsx), MS Access (.mdb/.accdb);	<100MB			

IR imaging data with AFM-IR	structural analysis of tau aggregates in mouse brain tissue	Generate new data	Digital	Experimental	Digital images in raster formats: uncompressed TIFF (.tif/.tiff), JPEG (.jpg), JPEG 2000 (.jp2), Adobe Portable Document Format (.pdf), bitmap (.bmp), .gif;	<100GB			
PS19 tau mouse line	study of human tau seeding in the PS19 mouse model	Reuse existing data	Physical	Experimental			1 colony	Biological and chemical samples: live animals, frozen samples in cryovials, samples stored at 4°C.	maintained in an animal house
PS19 tau mouse brains injected with human seeds	study of human tau seeding in the PS19 mouse model	Generate new data	Physical	Experimental			20 vials	Biological and chemical samples: live animals, frozen samples in cryovials, samples stored at 4°C.	
Mouse brain tissue sections	immunohistochemical, immunofluorescent staining	Generate new data	Physical	Experimental			1000 sections	Biological and chemical samples: live animals, frozen samples in cryovials, samples stored at 4°C.	
Microscope images of stained tissue sections	study of human tau seeding in the PS19 mouse model	Generate new data	Digital	Experimental	Digital images in raster formats: uncompressed TIFF (.tif/.tiff), JPEG (.jpg), JPEG 2000 (.jp2), Adobe Portable Document Format (.pdf), bitmap (.bmp), .gif;	<100GB			
Quantitation results of aggregate size and frequency	study of human tau seeding in the PS19 mouse model	Generate new data	Digital	Compiled/aggregated data	Quantitative tabular data: comma-separated value files (.csv), tab-delimited file (.tab), delimited text (.txt), MS Excel (.xls/.xlsx), MS Access (.mdb/.accdb);	<100MB			
AFM images with AFM-IR	morphological analysis of human tau aggregates in mouse brain tissue	Generate new data	Digital	Experimental	Digital images in raster formats: uncompressed TIFF (.tif/.tiff), JPEG (.jpg), JPEG 2000 (.jp2), Adobe Portable Document Format (.pdf), bitmap (.bmp), .gif;	<100GB			
AFM-IR spectroscopy data	structural analysis of human tau aggregates in mouse brain tissue	Generate new data	Digital	Experimental	Quantitative tabular data: comma-separated value files (.csv), tab-delimited file (.tab), delimited text (.txt), MS Excel (.xls/.xlsx), MS Access (.mdb/.accdb);	<100MB			
IR imaging data with AFM-IR	structural analysis of human tau aggregates in mouse brain tissue	Generate new data	Digital	Experimental	Digital images in raster formats: uncompressed TIFF (.tif/.tiff), JPEG (.jpg), JPEG 2000 (.jp2), Adobe Portable Document Format (.pdf), bitmap (.bmp), .gif;	<100GB			
Manuscript	summarizing results	Generate new data	Digital	Compiled/aggregated data	Text files: Rich Text Format (.rtf), plain text data (Unicode, .txt), MS Word (.doc/.docx), eXtensible Markup Language (.xml), Adobe Portable Document Format (.pdf), LaTex (.tex) format;	<100MB			

If you reuse existing data, please specify the source, preferably by using a persistent identifier (e.g. DOI, Handle, URL etc.) per dataset or data type:

Human Tissue: BioBank (https://www.uzleuven.be/nl/biobank)

Are there any ethical issues concerning the creation and/or use of the data (e.g. experiments on humans or animals, dual use)? Describe these issues in the comment section. Please refer to specific datasets or data types when appropriate.

- Yes, human subject data
- Yes, animal data

The human post-mortem tissue use is ethically approved. Ethical approval reference numbers: S-59295 & S-63759
The human data will come from post-mortem tissue. There is no GDPR issue
The research involves living animals and it is ethically approved. Ethical approval reference number: 184/2020

Will you process personal data? If so, briefly describe the kind of personal data you will use in the comment section. Please refer to specific datasets or data types when appropriate.

- No

NA

Does your work have potential for commercial valorization (e.g. tech transfer, for example spin-offs, commercial exploitation, …)? If so, please comment per dataset or data type where appropriate.

- No

We do not exclude that the proposed work could result in research data with the potential for tech transfer and valorization. VIB and KU Leuven have a policy to actively monitor research data for such potential. If there is substantial potential, the invention will be thoroughly assessed, and in a number of cases, the invention will be IP-protected (mostly patent protection or copyright protection). As such IP protection does not withhold the research data from being made public. In the case a decision is taken to file a patent application it will be planned so that publications need not be delayed. Further research beyond the scope of this project may be necessary for developing a strong IP portfolio.

Do existing 3rd party agreements restrict exploitation or dissemination of the data you (re)use (e.g. Material/Data transfer agreements/ research collaboration agreements)? If so, please explain in the comment section to what data they relate and what restrictions are in place.

- No

NA

Are there any other legal issues, such as intellectual property rights and ownership, to be managed related to the data you (re)use? If so, please explain in the comment section to what data they relate and which restrictions will be asserted.

- No

NA

2. Documentation and Metadata

Clearly describe what approach will be followed to capture the accompanying information necessary to keep data understandable and usable, for yourself and others, now and in the future (e.g., in terms of documentation levels and types required, procedures used, Electronic Lab Notebooks, README.txt files, Codebook.tsv etc. where this information is recorded).

Metadata will be documented by the research and technical staff at the time of data collection and analysis, by taking careful notes in the electronic laboratory notebook (E-notebook) and/or in hard copy lab notebooks that refer to specific datasets. All datasets will be accompanied by a README.txt file containing all the associated metadata. The data will be generated following standardized protocols. Clear and detailed descriptions of these protocols will be stored in our lab protocol database, and published along with the results.

Will a metadata standard be used to make it easier to find and reuse the data? If so, please specify (where appropriate per dataset or data type) which metadata standard will be used. If not, please specify (where appropriate per dataset or data type) which metadata will be created to make the data easier to find and reuse.

- No

Digital files will be named following a standard procedure so that all the names of all files in a given dataset will be in the same format: All names will start with the date (and time if applicable), followed by the project acronym, a short but specific descriptive name and a version number (containing leading zeros as needed) if applicable. Whenever possible names will be kept under 32 characters. Names will only contain letters, numbers, and underscores. Dots will only be used for version control indicators (minor revisions indicated by decimal numbers, and major revisions by whole numbers): YYYYMMDD_HHmm_Project_Experiment_ version.format
All changes in the files will be recorded. Data files will be stored in suitably labeled and organized folders and sub-folders, accompanied by a README.txt file in the top-level directory of the dataset, containing all the associated metadata. This will allow the data to be understood by other members of the laboratory and add contextual value to the dataset for future reuse. File names and locations will be recorded in the E-notebook to allow electronic records to be linked to the raw data.
Metadata will include the following elements:
• Title: free text
• Creator: Last name, first name, organization
• Date and time reference
• Subject: Choice of keywords and classifications
• Description: Text explaining the content of the data set and other contextual information needed for the correct interpretation of the data, the software(s) (including version number) used to produce and to read the data, the purpose of the experiment, etc.
• Format: Details of the file format,
• Resource Type: data set, image, audio, etc.
• Identifier: DOI (when applicable)
• Access rights: closed access, embargoed access, restricted access, open access.

3. Data storage & back-up during the research project

Where will the data be stored?

Digital files will be stored either on KU Leuven servers or in shared laboratory folders of an off-site online backup service. The researchers working on the project will have copies of the data files as well as of the derived and compiled data stored on their personal computers.
The Switch Lab has a professional subscription to an off-site online backup service with unlimited space, version control, and roll-back capability, which will be used for storage during the project

and after. There is a secondary on-campus physical backup of the online storage which synchronizes with the online content with a one-day delay.
Algorithms, scripts, and softwares: All the relevant algorithms, scripts and software code driving the project will be stored in a private online git repository from the GitHub account of the department (https://github.com/vibcbd).
The imaging/screening core has a database system in place to handle the data stream from the high-content imaging screen, including archiving facilities, and will store the data during the project. Representative images and the quantitation of the images will be transferred to the Switch laboratory storage for long-term storage.
Cell lines: Newly created cell lines will be stored locally in the laboratory in liquid nitrogen storage and will be deposited in the UZ Leuven-KU Leuven Biobank.
Human Samples: Stained sections and residual tissue from autopsy cases will be stored in UZ Leuven biobank
Mouse Samples: Tissues will be stored at -80°C and stained sections will be stored at room temperature or/and 4°C
Other biological and chemical samples: storage at 4°C, -20°C, or -80°C and/or as frozen samples in cryovials as appropriate.

How will the data be backed up?

The Switch Lab has a professional subscription to an off-site online backup service with unlimited space, version control and roll-back capability, which will be used for storage during the project and after. There is a secondary on-campus physical backup of the online storage which synchronizes with the online content with a one-day delay. We also use standard back-up provided by KU Leuven ICTS.

Is there currently sufficient storage & backup capacity during the project? If yes, specify concisely.
If no or insufficient storage or backup capacities are available, then explain how this will be taken care of.

- Yes

The Switch Lab has a professional subscription to an off-site online backup service with unlimited space, which will be used for storage during the project and after.

How will you ensure that the data are securely stored and not accessed or modified by unauthorized persons?

All notebooks and physical data are stored in the labs. Entry to the lab requires ID-card and key. Access to the digital data is u-number and password controlled.

What are the expected costs for data storage and backup during the research project? How will these costs be covered?

Data storage and backup costs are included in general lab costs. The Switch Lab has a yearly subscription to an off-site online backup service paid from the general budget of the laboratory. The yearly cost of the service is 5500 Euros. This cost includes unlimited data storage, not only the data belonging to the present project. Electricity costs for the -80° and -20° freezers and refrigerators present in the labs as well as the cost of liquid nitrogen cryostorage are included in general lab costs.

4. Data preservation after the end of the research project

Which data will be retained for at least five years (or longer, in agreement with other retention policies that are applicable) after the end of the project? In case some data cannot be preserved, clearly state the reasons for this (e.g. legal or contractual restrictions, storage/budget issues, institutional policies...).

The minimum preservation term of 5 years after the end of the project will be applied to all datasets.

Where will these data be archived (stored and curated for the long-term)?

As a general rule, datasets will be made openly accessible, whenever possible via existing platforms that support FAIR data sharing (www.fairsharing.org), at the latest at the time of publication. For all other datasets, long-term storage will be ensured as follows:
-Digital datasets will be stored in the storage space of an online data backup service.
-Cell lines: Newly created cell lines will be stored locally in the laboratory in liquid nitrogen storage and will be deposited in the UZ Leuven-KU Leuven Biobank.
-For Human Samples and sections: Tissues and stained sections will be stored in the UZ Leuven biobank.
-Mouse Samples: Tissues will be stored at -80°C and stained sections will be stored at room temperature or/and 4°C.
Other biological and chemical samples: storage at 4°C, -20°C or -80°C and/or as frozen samples in cryovials as appropriate.

What are the expected costs for data preservation during the expected retention period? How will these costs be covered?

Electricity costs for the -80° and -20° freezers and refrigerators present in the labs as well as for liquid nitrogen cryostorage are included in general lab costs. The cost of the laboratory's professional subscription to the online data backup service is 5500 Euros per year (27 500 Euros for 5 years). This cost includes unlimited data storage, not only the data belonging to the present project. Data storage and backup costs are included in general lab costs.

5. Data sharing and reuse

Will the data (or part of the data) be made available for reuse after/during the project? In the comment section please explain per dataset or data type which data will be made available.

- Yes, in an Open Access repository

Participants in the present project are committed to publishing research results to communicate them to peers and to a wide audience. All research outputs supporting publications will be made openly accessible. Depending on their nature, some data may be made available prior to publication, either on an individual basis to interested researchers and/or potential new collaborators, or publicly via repositories (e.g. negative data). We aim at communicating our results in top journals that require full disclosure upon publication of all included data, either in the main text, in supplementary material, or in a data repository if requested by the journal and following deposit advice given by the journal. Depending on the journal, accessibility restrictions may apply. Physical data (e.g. cell lines) will be distributed to other parties if requested.

If access is restricted, please specify who will be able to access the data and under what conditions.

NA

Are there any factors that restrict or prevent the sharing of (some of) the data (e.g. as defined in an agreement with a 3rd party, legal restrictions)? Please explain in the comment section per dataset or data type where appropriate.

- No

NA

Where will the data be made available? If already known, please provide a repository per dataset or data type.

- The data will be shared upon request by mail.
- Possible ways of sharing the generated data
  - Human tissue: BioBank (https://www.uzleuven.be/nl/biobank)
  - cell lines: direct mailing on dry ice
  - microscope images: Image Data Resource (http://idr.openmicroscopy.org/about/)
  - manuscripts: bioRxiv (https://www.biorxiv.org/)
  - other digital data: Zenodo data repository (https://zenodo.org/)

When will the data be made available?

Upon publication of the research results
Generally, research outputs will be made openly accessible at the latest at the time of publication. No embargo will be foreseen unless imposed e.g. by pending publications, potential IP requirements – note that patent application filing will be planned so that publications need not be delayed - or ongoing projects requiring confidential data. In those cases, datasets will be made publicly available as soon as the embargo date is reached.

Which data usage licenses are you going to provide? If none, please explain why.

Metadata will contain sufficient information to support data interpretation and reuse and will conform to community norms. These repositories clearly describe their conditions of use (typically under a Creative Commons CC0 1.0 Universal (CC0 1.0) Public Domain Dedication, a Creative Commons Attribution (CC-BY) or an ODC Public Domain Dedication and Licence, with a material transfer agreement when applicable). Interested parties will thereby be allowed to access data directly, and they will give credit to the authors for the data used by citing the corresponding DOI. For data shared directly, a material transfer agreement (and a non-disclosure agreement if applicable) will be concluded with the beneficiaries in order to clearly describe the types of reuse that are permitted.

Do you intend to add a PID/DOI/accession number to your dataset(s)? If already available, you have the option to provide it in the comment section.

- No

What are the expected costs for data sharing? How will these costs be covered?

It is the intention to minimize data management costs by implementing standard procedures e.g. for metadata collection and file storage and organization from the start of the project, and by using free-to-use data repositories and dissemination facilities whenever possible. Data management costs will be covered by the laboratory budget. The receiving party will pay for sharing physical data (e.g. cell lines).

6. Responsibilities

Who will manage data documentation and metadata during the research project?

Metadata will be documented by the research and technical staff at the time of data collection and analysis, by taking careful notes in the electronic laboratory notebook (E-notebook) that refer to specific datasets.

Who will manage data storage and backup during the research project?

The research and technical staff will ensure data storage and back up, with support from Alexander Botzki for the electronic laboratory notebook (ELN) and from Raf De Coster for the KU Leuven drives.

Who will manage data preservation and sharing?

The main researcher, Grigoria Tsaka, is responsible for data preservation and sharing, with support from the research and technical staff involved in the project, including Hannah Wilkinson. Extra support will come from Alexander Botzki for the electronic laboratory notebook (ELN) and from Raf De Coster for the KU Leuven drives.

Who will update and implement this DMP?

The main researcher, Grigoria Tsaka, is ultimately responsible for all data management during and after data collection, including implementing and updating the DMP.