DMP Lorenzo Mattolini

Project Name DIRECTING TISSUE FOLDING AND MORPHOGENESIS IN NEURAL TUBE ORGANOIDS. - DMP Lorenzo Mattolini

Project Identifier Form Number: D-2021-1206

Grant Title 11K5722N

Principal Investigator / Researcher Lorenzo Mattolini

Project Data Contact lorenzo.mattolini@kuleuven.be

Description We aim to create a new organoid model to investigate the role of forces during neural development. Data will consist of fluorescent microscope images to recognize different cell types.

Institution KU Leuven

1. General Information

Name applicant

Lorenzo Mattolini

FWO Project Number & Title

11K5722N Guiding in vitro human neural tube morphogenesis via a biomimetic mechanical actuation platform

Affiliation

- KU Leuven

2. Data description

Will you generate/collect new data and/or make use of existing data?

- Generate new data

Describe in detail the origin, type and format of the data (per dataset) and its (estimated) volume. This may be easiest in a table (see example) or as a data flow and per WP or objective of the project. If you reuse existing data, specify the source of these data. Distinguish data types (the kind of content) from data formats (the technical format).

The data types collected will involve mainly microscopy-acquired images:

Microscopy images, .tif, 200 GB, confocal or fluorescent microscope.

3. Legal and ethical issues

Will you use personal data? If so, shortly describe the kind of personal data you will use. Add the reference to your file in KU Leuven's Register of Data Processing for Research and Public Service Purposes (PRET application). Be aware that registering the fact that you process personal data is a legal obligation.

- No

Privacy Registry Reference:

Short description of the kind of personal data that will be used:

Are there any ethical issues concerning the creation and/or use of the data (e.g. experiments on humans or animals, dual use)? If so, add the reference to the formal approval by the relevant ethical review committee(s)

- No

Does your work possibly result in research data with potential for tech transfer and valorisation? Will IP restrictions be claimed for the data you created? If so, for what data and which restrictions will be asserted?

- No

Do existing 3rd party agreements restrict dissemination or exploitation of the data

you (re)use? If so, to what data do they relate and what restrictions are in place?

- No

4. Documentation and metadata

What documentation will be provided to enable reuse of the data collected/generated in this project?

For microscopy images, the following information will be noted: dimensions, image type, bit-depth, pixel sizes, and microscope settings. I will use the lab notebook to describe the methodology and the protocol. I will write a ReadMe file of the image collection.

Will a metadata standard be used? If so, describe in detail which standard will be used. If no, state in detail which metadata will be created to make the data easy/easier to find and reuse.

- No

Metadata with experimental procedures and storage will be created manually and saved to read and interpret the data for future users. I will document this information while performing the experiments and I will use OpenBIS as metadata repository.

5. Data storage and backup during the FWO project

Where will the data be stored?

The time-stamped master copy of the data will be kept in our research unit central storage facility. I will make copies and keep on personal devices.

How is backup of the data provided?

The data will be stored on the KU Leuven servers with automatic daily backup procedures.

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

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

Costs will be covered by the project or lab budget whenever needed.

Data security: how will you ensure that the data are securely stored and not accessed or modified by unauthorized persons?

Access to the folder containing all project related data is restricted to the project researchers and access can only be granted by the PI and it's protected by a password.

6. Data preservation after the FWO project

Which data will be retained for the expected 5 year period after the end of the project? In case only a selection of the data can/will be preserved, clearly state the reasons for this (legal or contractual restrictions, physical preservation issues, ...).

All the data will be retained for the expected 5 year period after the end of the project.

Where will the data be archived (= stored for the longer term)?

The data will be stored on the university's central servers (with automatic back-up procedures) for at least 10 years, conform the KU Leuven RDM policy.

What are the expected costs for data preservation during the retention period of 5 years? How will the costs be covered?

Costs will be covered by the FWO project or the lab budget.

7. Data sharing and reuse

Are there any factors restricting or preventing the sharing of (some of) the data (e.g. as defined in an agreement with a 3rd party, legal restrictions)?

- No

Which data will be made available after the end of the project?
The full dataset will be uploaded in a cvs format in Zenodo under a CC-BY license.

Where/how will the data be made available for reuse?

- Other (specify):

The full dataset with documentation will be uploaded in a cvs format in Zenodo.

When will the data be made available?

- Upon publication of the research results

Who will be able to access the data and under what conditions?
The full dataset will be uploaded in a cvs format in Zenodo as an open access dataset under a CC-BY license. Therefore, it will be available to anyone for any purpose, provided that they give appropriate credit to the creators.

What are the expected costs for data sharing? How will the costs be covered?
Costs will be covered by the project or lab budget whenever needed.

8. Responsibilities

Who will be responsible for data documentation & metadata?
The PI and Lorenzo Mattolini will be responsible for data documentation & metadata.

Who will be responsible for data storage & back up during the project?
The PI and Lorenzo Mattolini will be responsible for data storage & back up during the project.

Who will be responsible for ensuring data preservation and reuse ?
The PI and Lorenzo Mattolini will be responsible for ensuring data preservation and reuse.

Who bears the end responsibility for updating & implementing this DMP?
The PI and Lorenzo Mattolini bears the end responsibility of updating & implementing this DMP.