

Plan Overview

A Data Management Plan created using DMPTool

Title: The fruitfly *Drosophila melanogaster* as an alternative animal model for translational science of molecular mechanisms of human liver diseases

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Project abstract:

Liver diseases are a major health problem worldwide and the number of people affected by nonalcoholic fat liver disease (NAFLD) has been increasing in the past decades. The pathology may progress from benign non-alcoholic fatty liver (NAFL) to more advanced stages such as cirrhosis and hepatocarcinoma. However, the molecular mechanisms underlying the disease progression has to be deeply investigated prior to the development of innovative therapeutic strategies. In this context, RNA technology and novel genetic tools emerged as innovative and efficient molecular approaches to decipher the molecular routes that potentially control and/or reverse NAFLDs and the related pathologies. Dr Moraes has been awarded of a regular FAPESP grant to perform proteomics analysis following the misexpression of the micro RNA 1914-5p in liver-derived cell lines. In pro-steatotic cultured cells, this miRNA has been shown to control lipid metabolism, and it potentially targets more than 100 mRNA encoding proteins connected to this metabolism. To validate in an in vivo model the relevant candidates that will be identified in the proteomics approach, we plan to use the genetic tools of *Drosophila melanogaster*, which emerges

as a powerful model system for the study of metabolic diseases. This collaborative project will strengthen the interactions between researchers from CNRS (Drosophila task) and the São Paulo State (proteomics task).

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End date: 12-31-2021

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The fruitfly *Drosophila melanogaster* as an alternative animal model for translational science of molecular mechanisms of human liver diseases

Data Collection

What data will you collect or create?

Several data will be obtained after the analyses of the fly mutants, and includes, fly viability and major changes in lipid metabolism, histopathological damages, and general biochemical changes in organism homeostasis due to the suppression or overexpression of the miR-1914-5p.

How will the data be collected or created?

The assays will be performed using different controls, to assure the quality of the ongoing assays and all the information and details about the experimentation and their results will be collected and plotted in representative tables and graphics (.doc or .xls format).

Documentation and Metadata

What documentation and metadata will accompany the data?

Data will be stored allowing future studies to everyone in needed
Supplementary metadata will include the analytical method used, name of the responsible, and statistical tools used to analyse the raw data
Also, anyone could reach some missing information requesting the researcher responsible for this project.

Ethics and Legal Compliance

How will you manage any ethical issues?

The experiments will be performed with *Drosophila melanogaster*, which do not need any approval from Ethics Committee.

How will you manage copyright and Intellectual Property Rights (IP/IPR) issues?

Processed data will be freely available as long as they are produced. Raw data will be released after the publication of the results as articles, reports or theses/monographies or 2 years after the end of the project.

Storage and Backup

How will the data be stored and backed up during the research?

During the research, data will be stored in personal computers and rigid disks, with virtual backups (google drive, dropbox, or similars)

How will you manage access and security?

All the laboratory researchers have access to the raw data stored in the hard drive and in the storage clouds. However, to have access to this, the researchers need to ask for the responsible for the project. Also, the data is secure by stronger passwords with only the PIs will have this information

Selection and Preservation

Which data are of long-term value and should be retained, shared, and/or preserved?

The data will be shared through the academic community in scientific papers. Also, researchers who request access to the data will need to formally request this access for the responsible researcher of the project and the identity of the subjects will be warranty.

What is the long-term preservation plan for the dataset?

Data will be made available for how long the institutional repository exists.

Data Sharing

How will you share the data?

The data will be available at any time upon a formal request with the responsible for the project. Also, we intended to share the raw data via a repository to facilitate.

Are any restrictions on data sharing required?

There are no restrictions on sharing the data.

Responsibilities and Resources

Who will be responsible for data management?

The data management will be performed by the responsible researchers for this project

What resources will you require to deliver your plan?

No requirements.
