

Research Data Management Support @ Charles University



CHARLES UNIVERSITY
Open Science Support Centre

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Project RKV II
1st April 2021

Open Science Support Centre
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Tato prezentace byla podpořena projektem OP VVV Rozvoj kapacit pro výzkum a vývoj UK II, CZ.02.2.69/0.0/0.0/18_054/0015222



UNIVERZITA
KARLOVA



EVROPSKÁ UNIE
Evropské strukturální a investiční fondy
Operační program Výzkum, vývoj a vzdělávání



MINISTERSTVO ŠKOLSTVÍ,
MLÁDEŽE A TĚLOVÝCHOVY



HR EXCELLENCE IN RESEARCH

Open Science Support Centre

- established 01/2020
- is department of Central Library of Charles University
- 2 primary areas of interest
 - Open Access (publications) & Open Data
 - ... are parts of wider **Open Science** problematics
 - **Open Science** is the **practice of science in such a way** that others can collaborate and contribute, where research data, lab notes and other research processes are freely available, under terms that enable reuse, redistribution and reproduction of the research and its underlying data and methods. <https://www.fosteropenscience.eu/foster-taxonomy/open-science-definition>



Data Management Plan

- library perspective
 - we want to provide data as an “electronic resource”
 - we need well managed data (identifiers, descriptions, licenses..)
- ... and we are not alone
- there are many aspects of work with research data – creating Data Management Plan (DMP) should help with **identifying** and **addressing** key issues of your project
- ... and help you produce quality data when you decide to publish them

Data Management Plan (2)

- formal document (should be updated during the research process)
- specifies **what** data will be created and **how**
- outlines the plans for **sharing** and **preservation** of the data, both during and after the research project (there may be specific requirements by funders).

1. Administrative data
2. Data collection
3. Documentation and metadata
4. Ethics and Legal compliance
5. Storage and backup
6. Selection and preservation
7. Data sharing
8. Responsibilities and resources

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DMP Support

- DMP must be created by the researcher
 - nobody from outside has sufficient knowledge
- but institutions should provide support for specific areas
- for example
 - description and metadata, data publication, indexing and discovery – library
 - storage and sharing of “active” data, backups – IT
 - licensing, conditions of reuse – lawyers, technology transfer
 - personal data – GDPR Officer
 - ethics – Research Ethics Commissions

DMP Support (2)

- DMP Support Group was established in 2020
- cooperation of different departments of CU's Rectorate
 - Open Science Support Centre, Department of Science and Research, Computer Science Centre, Centre for Transfer of Knowledge and Technology, Rector's Office,...
- Do you have any specific questions related to your DMP?
→ contact e-mail: dmp@cuni.cz

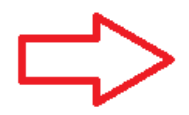
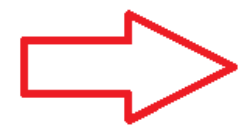
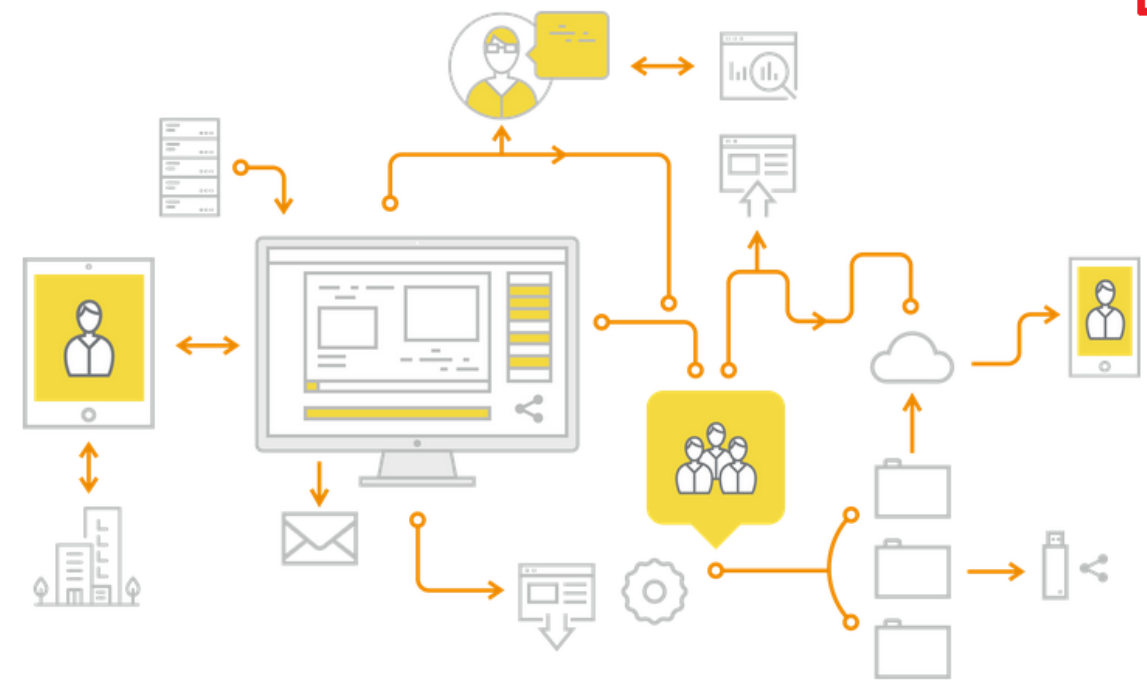
OSSC Support

- OSSC also takes care of more general topics (related to OS)
 - General overview of Research Data Management
 - DMP tools
 - FAIR Data principles, “as open as possible, as closed as necessary”
 - Open Science propagation and education (important!)
 - Open Access
 - ...



Plan to make data work for you

Data Management Plans that meet institutional funder requirements.



Sign in **Create account**

* **Email**

* **Password**

[Forgot password?](#)

Remember email

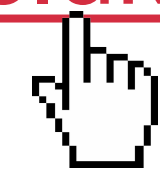
Sign in

- or -

Sign in with your institutional credentials

DMPonline helps you to create, review, and share data management plans that meet institutional and funder requirements. It is provided by the Digital Curation Centre (DCC).

dmponline.dcc.ac.uk



A role of striatal M4 muscarinic acetylcholine receptors in learning of stereotypic motor sequences

Project Details

Plan overview

Write Plan

Share

Download

* Project title

A role of striatal M4 muscarinic acetylcholine receptors in learni

mock project for testing, practice, or educational purposes

Funder

Grant number

e.g. 123456

Project abstract

Striatum is the main input nucleus of the basal ganglia, important for the learning, emitting and updating of stereotypic motor sequences (habits). While the M4 muscarinic acetylcholine receptors are abundantly expressed in the striatum, their role in acquiring and changing habits is not known. Therefore, in this pilot study, we use M4-preferential antagonist tropicamide to test

ID

70551

Principal Investigator

Select Guidance

To help you write your plan, DMPonline can show you guidance from a variety of organisations.

Select up to 6 organisations to see their guidance.

- Digital Curation Centre
- FAIRsFAIR - Fostering Fair Data Practices in Europe

Find guidance from additional organisations below

[See the full list](#)

Save

A role of striatal M4 muscarinic acetylcholine receptors in learning of stereotypic motor sequences

Data Collection

What data will you collect or create?

Following kinds of data will be created:

- „master sheet“
 - contains the information about the experiment - which mouse is in which part of the experiment, dates of specific sessions
 - master sheet will be updated manually by researchers
 - master sheet will be stored in XSL (MS Excel) format
- operant box program
 - defines sequence of operations that is requested in respective parts of mice's training
 - the program will be written in device specific programming language (MedAssociates)
- operant box logs
 - logs are stored automatically by the operant box
 - all mouse's interactions with operant box are recorded into log as two values
 - timestamp
 - operation code (eg. correct press, wrong press, issuing of reinforcement)
 - the data are in plain text, structure of the data (semantics) is described in MedAssociates documentation
 - operation codes are dependant on operant conditioning box program
- scripts for specific analysis and their outputs
 - scripts which take specific information from the logs (eg. time length of trial for a mouse) and store them in output file
 - scripts are written in Python
 - outputs are stored in CSV files

How will the data be collected or created?

Experiment data will be produced by operant box running selected programs. Further data will be created by scripts based on original operant box logs.

Documentation and Metadata

What documentation and metadata will accompany the data?

Complete methodologies will be part of published paper.
Description of codes generated by the operant box will be provided in separate file.
All programs and scripts are well commented.

Ethics and Legal Compliance

How will you manage any ethical issues?

The project was approved by ethical commission and fulfils requirements stated in Directive of the European Community Council on the use of laboratory animals (2010/63/EU)

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

Sharing of produced data will not be limited. Source codes will be published under an open source license.

Storage and Backup

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

Size of the data shall not reach more than Megabytes.
Data are stored on shared work station in the lab. Data backups are created regularly and according to Institute's internal policies.

How will you manage access and security?

Access and security are handled with respect to Institute's policy.

Selection and Preservation

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

Master sheet, operant box programs and experiment logs should be preserved long-term to ensure reproducibility of results.

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

TBD

Data Sharing

How will you share the data?

Data will be provided as part of published paper. Data will be shared in a data repository. Source codes will be also shared in source code repositories.

Are any restrictions on data sharing required?

All data will be shared after the paper is published.

Responsibilities and Resources

Who will be responsible for data management?

Principal investigator is responsible for overall data management.
Experiments are run by students working on the project.
Programs and scripts are created and updated by external collaborator.

What resources will you require to deliver your plan?

There are no additional resources needed.

Web

Charles University | Central Library | Repository

Text to search Search

f t y r s A A

ABOUT POLICY OPEN ACCESS RESEARCH DATA SUPPORT FAQ CONTACT

LEARN HOW TO MANAGE YOUR DATA
The Centre has launched a new online course on research data management

NEWS

Research data management online course now available in English
[read more >](#)
22 March 2021

The new catalog of OA Journals of the Faculty of Arts is online
[read more >](#)
18 March 2021

Publish in OA hybrid journals of Taylor & Francis free of charge
[read more >](#)
16 February 2021

Open Science at CUNI: Are we there yet?
[read more >](#)
20 January 2021

Open Access Dashboard shows the openness of CU publications
[read more >](#)
8 December 2020

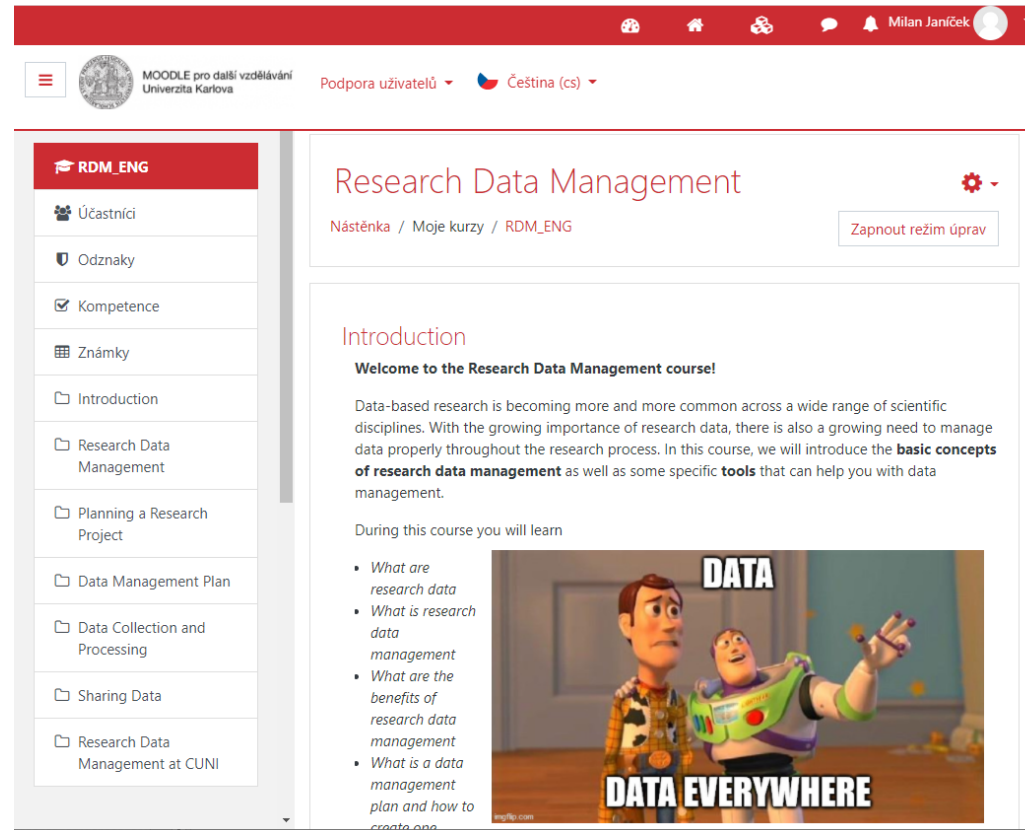
Introducing Open Research Europe
[read more >](#)
26 November 2020

[All news >](#)

DISCOUNTS ON OPEN ACCESS PUBLISHING FEES FOR CU AUTHORS

- <https://openscience.cuni.cz/>
 - Czech and English version
 - Open Science News
 - 2 main overview sections
 - Open Access (incl. APC discounts)
 - Research Data
- (page about Horizon Europe OS conditions is being finalized)

Online Courses (Moodle)



The screenshot shows a Moodle course interface. At the top, there is a navigation bar with the Moodle logo, the text 'MOODLE pro další vzdělávání Univerzita Karlova', and user information for 'Milan Janíček'. Below this is a sidebar menu for the course 'RDM_ENG', listing sections like 'Účastníci', 'Oznaky', 'Kompetence', 'Známky', 'Introduction', 'Research Data Management', 'Planning a Research Project', 'Data Management Plan', 'Data Collection and Processing', 'Sharing Data', and 'Research Data Management at CUNI'. The main content area is titled 'Research Data Management' and includes a 'Nástěnka / Moje kurzy / RDM_ENG' breadcrumb and a 'Zapnout režim úprav' button. The 'Introduction' section contains a welcome message and a list of topics to be covered, such as 'What are research data', 'What is research data management', 'What are the benefits of research data management', and 'What is a data management plan and how to create one'. A meme image of Buzz Lightyear is also present with the text 'DATA' and 'DATA EVERYWHERE'.

- <https://dlcv.cuni.cz/course/index.php?categoryid=125>
- Czech and English version
- “Open Access at CU – How to publish Open Access?”
- “Research Data Management”
- Guest access is possible

Seminars

UNIVERZITA KARLOVA
Centrum pro podporu open science

OPEN SCIENCE OD DAT K PUBLIKACI

3.-4. 2. 2021

Série školení pro **akademické a výzkumné pracovníky** Univerzity Karlovy v oblasti **správy vědeckých dat a open access publikování.**

bit.ly/openscienceuk2021

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MŠMT
MŠMT

- 02/2021 – for academics
- Open Science: Od dat k publikaci
- <https://openscience.cuni.cz/OSCI-117.html>
- recordings and presentations available!

- 05-06/2021 for administrative staff
- Jak podporovat Open Science
- <https://openscience.cuni.cz/OSCI-126.html>

JAK PODPOROVAT
OPEN SCIENCE

25. 5.-10. 6. 2021

Zverne Vás na školení pro technicko-administrativní pracovníky UK.

(we can also prepare presentation just for your group, contact us! openscience@cuni.cz)

Future? Opportunities!

- lots of things to improve
 - clear data / open access policies (national, institutional)
 - systematic Open Science education
 - tools (DMP, repositories)
 - Data Stewardship Wizard? ;-)
 - subject specific repositories connected to EOSC
 - institutional repository
 - long term preservation
 - Open Science practices part of rewards and incentives mechanism
 - (OS as necessary requirement for excellence? EC is moving in this direction)



Contacts

- Data Management Plan – central support (Rectorate):
 - dmp@cuni.cz
- Open Science / Open Access central support (Open Science Support Centre - library):
 - openscience@cuni.cz
- Faculty of Science Open Access coordinator
 - Radka Lukášová - radka.lukasova@natur.cuni.cz
- ... feel free to contact me with any research data management related issue as well: milan.janicek@ruk.cuni.cz



Useful Resources

- OSSC pages (Open Access, Research data, Open Science...)
 - <https://openscience.cuni.cz/OSCIEN-1.html>
- Open Science Moodle Courses
 - <https://dlcv.cuni.cz/course/index.php?categoryid=125&lang=en>
- Faculty of Science - Open Access page (cze)
 - <https://www.natur.cuni.cz/fakulta/oddeleni-pro-vedu/open-access>





Thank you
for your attention.

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