

FAIR DATA AUSTRIA

RESEARCH DATA MANAGEMENT (RDM) IN THE LIFE

SCIENCES: From writing DMPs to RDM practices and RDM support

08.06.2021

HOSTED BY

MEDICAL UNIVERSITY OF GRAZ

& BioTechMed-Graz









EVENT SERIES "RESEARCH DATA MANAGEMENT IN AUSTRIA"

The event series "Research Data Management in Austria" is aimed at researchers and/or research support staff and serves to promote networking and exchange on the topic of research data management – like writing a data management plan and related topics.

Slides and recording will be available on the project website soon:



forschungsdaten.at/en/fair-data-austria/materials/













TECHNICALITIES

In order to avoid background noise, we ask all participants to switch to "mute"



Please post all questions in the chat, they will be answered after the presentation or as soon as appropriate



The presentations will be recorded



AGENDA

10.00 – 10.15	Welcome & Opening	Peter Schaffer VR Caroline Schober
10.15 – 10.30	RDM & FAIR Data Austria Project	Ilire Hasani-Mavriqi
10.30 – 10.45	The FWF Data Management Plan	Katharina Rieck
10.45 – 11.05	The Necessity for RDM in Computational Protein Design	Gustav Oberdorfer
11.05 – 11:20	RDM Support at BioTechMed-Graz Universities	Sarah Stryeck (TU Graz) Christian Kaier (Uni Graz) Therese Macher (Med Uni Graz)



OPENING

Caroline Schober – Medical University of Graz

Caroline Schober is Vice-Rector for Research & International Affairs at the Medical University of Graz, Chair of the Executive Committee of BioTechMed-Graz and Expert Group member on Open Science/Science 2.0. of the European University Association (EUA). She is Biochemist and Molecularbiologist with longterm experience in international research management.







BioTechMed-Graz

BioTechMed-Graz merges research activities at the interface of basic biomedical science, technological developments and medical/clinical applications with the aim of joint research for health

Research alliance since 2013 | University of Graz, Graz University of Technology, Medical University of Graz

Research Areas

- Molecular Biomedicine
- Neurosciences
- Pharmaceutical and Medical Technology, Biotechnology
- Quantitative Biomedicine and Modeling

Directors Rudolf Zechner, Robert Krause







BioTechMed GRAZ

BioTechMed-Graz | selection of activities & programs

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• Flagship Projects | Calls 2016 & 2019 - 6 flagship projects total excellent scientific achievements, reach high international visibility and build a basis for follow-up funded projects

Promotion of young scientists

- Young Researcher Groups | Call 2019 3 groups by female PIs support the most exceptional and promising postdoctoral fellows within BioTechMed-Graz to launch an independent research group
- Lab Rotation Program potential doctoral students broaden their scientific interests beyond the topic of their master thesis Call 2021 open until 28th June (www.biotechmedgraz.at/lrp)

Cori Institute of Molecular and Computational Metabolism

BioTechMed-Graz Universities & Austrian Academy of Science: Create an excellent innovation and incubation campus that enjoys the highest international visibility

Common Infrastructure









RDM & FAIR DATA AUSTRIA

Ilire Hasani-Mavriqi – Graz University of Technology

Ilire Hasani-Mavriqi is head of RDM Team of TU Graz and Senior Researcher at Know-Center. She is coordinator of the BMBWF project FAIR Data Austria. Her research interests include Research Data Management, Open Science, Web Science, Social Computing, Complex Networks, Agent Based Modelling and Computational Social Science.









Question 1 @Ilire Hasani-Mavriqi: What is your strategy/how can you ensure to always fulfill the requirements of different international journals and funders regarding RDM? Are you in contact with them? Or are there international standards?

Of course some of the requirements are aligned internationally. For example if you speak about requirements coming from funders and publishers Science Europe (SE) is the best address. We are considering all the advices and guidelines that come from SE. For example for the maDMP we are implementing the broader template that was published recently by SE. So there are alignments on international level and our team is involved in this initiatives. We try to be on track and to get all the information.

Some requirements come from researchers. When they have to provide answers regarding RDM they contact us. It is also a bit of a duty of each RDM team or any other offices at the University to spread this information to researchers. For example, in regard to repositories, best solution would be to have an institutional repository. Currently we are working on rolling out InvenioRDM as a solution to many Universities in Austria. So researchers would have the possibility to publish their data to fulfil the requirements from the funders or publishers, of course, if they have the possibility to publish their data openly. Researchers can generate a DOI (Digital Object Identifier) and funders or publishers can check that. But even if there are some restrictions researchers can still make the data available—at least the metadata—and show the publisher that the data have been archived in an institutional repository. If for a particular purpose an access to the data is needed, researchers can be contacted.



Question 1



My actual experience with data management plans:

- I already created one (or more) "official DMP(s)" (e.g. at the requests of funding agencies, ...)
- I already created one (or more) "unofficial DMP(s) for myself" (without "external requests" but using "official templates")
- I already created one (or more) specific document(s) describing research data management for my project/thesis/... without following specific DMP-templates
- My research data management is more or less process dependent and does not need special descriptive documents
- None of the above answer possibilities is applicable



THE FWF DATA MANAGEMENT PLAN

Katharina Rieck – Austrian Science Fund (FWF)

Katharina Rieck is responsible for the development of the FWF Open Access policy to Peer-reviewed publications and to Research Data. She manages the programmes "Peer-Reviewed Publications" and the FWF "Open Research Data Pilot". Katharina is a core team member of the "Open Science Network Austria (OANA)" where she co-chairs the working groups "Open Science Strategy" and "Open Science Information". She represents the FWF in several national and international networks and working groups such as the Science Europe working group on Research Data, the Europe PMC funder committee and Austrian Transition to Open Access working groups.









Question 1 @Katharina Rieck: When I make data that are the basis of a publication openly available, at what 'level' am I supposed to make them available? To illustrate this: As chemists, when we analyse compounds, the analytical instruments will generate some sort of primary data (e.g. an intensity readout vs time), which we then convert into, e.g., a chemical composition. Am I supposed to make available the primary data, the interpretation of it, or both?

At FWF, we ask you to make the data that underlies the publications open access and don't specify this more. We assume that you as the one producing the data knows best, what data/information is necessary to make your results reproducible.

Question 2 @Katharina Rieck: You mentioned the necessity of providing explanations in case data "can" not be made openly available. Is a planned commercial exploitation of research results and related intellectual property protection potentially an acceptable reason/explanation?

yes, that would be one reason. We are currently working with Science Europe to make Open Data exceptions clearer.

12



Question 2



My research data management

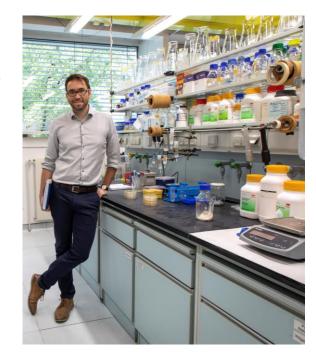
- I am completely satisfied with the quality of my research data management
- () I see little room for improvement in my research data management
- I see a clear opportunity for improvement in my research data management
- () None of the above answer possibilities is applicable



THE NECESSITY FOR RDM IN COMPUTATIONAL PROTEIN DESIGN

Gustav Oberdorfer – Graz University of Technology

Gustav Oberdorfer ist Assistant Professor at the Institute of Biochemistry and Principal Investigator of the research group Protein Design at TU Graz. His main research interests revolve around the computational design of novel proteins. In 2019 he received an ERC Starting Grant for his work.

















RDM SUPPORT AT BIOTECHMED-GRAZ

Sarah Stryeck

Data Steward at Graz University of Technology



RDM Support at University of Graz

Therese Macher

RDM Support at Medical University of Graz













RDM Team @ TU Graz



Technical staff









Data Stewards & PM







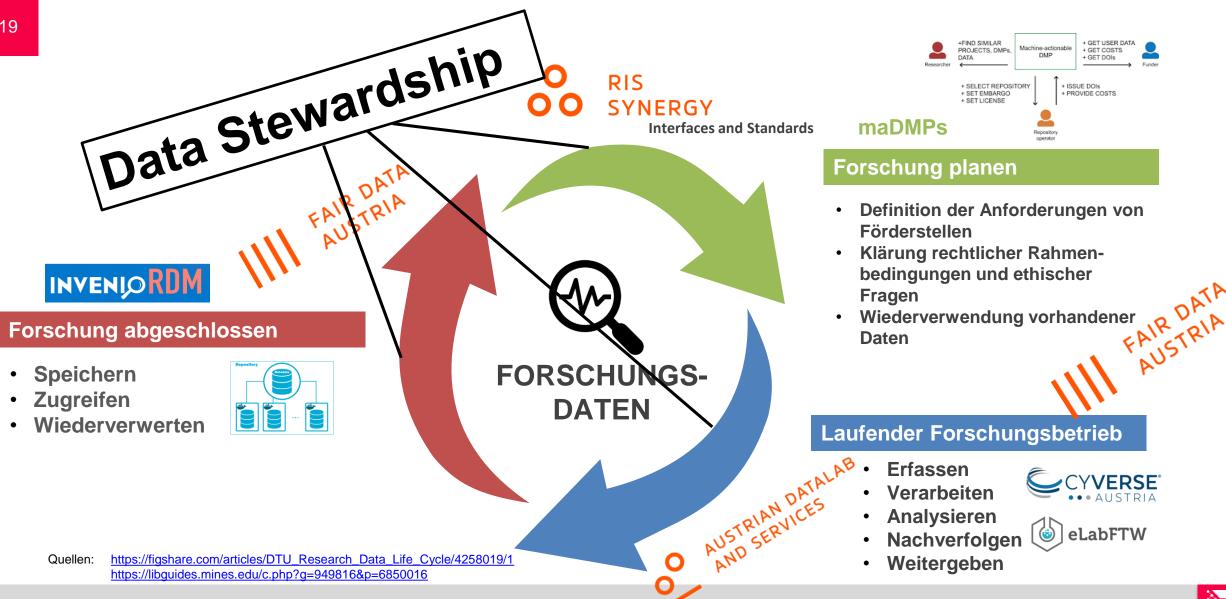




https://rdm.tugraz.at

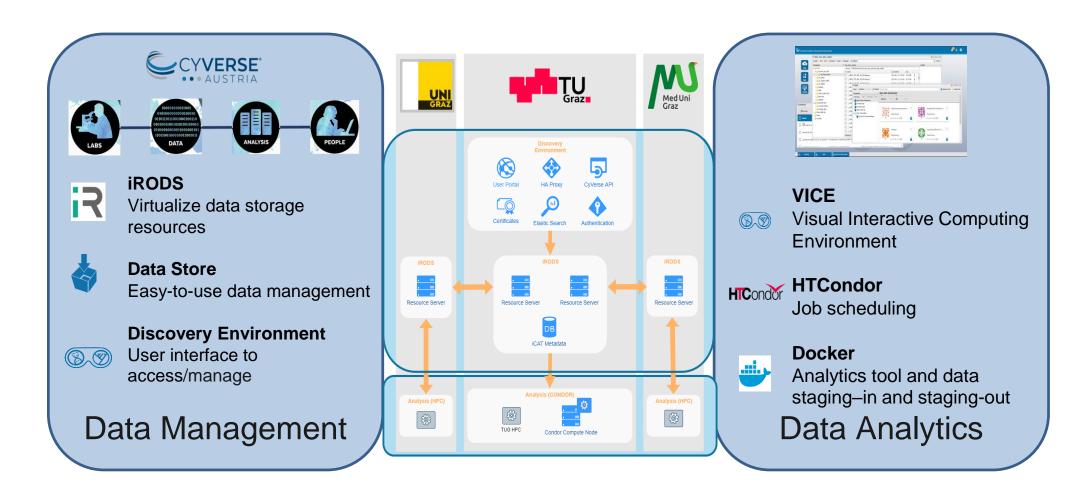






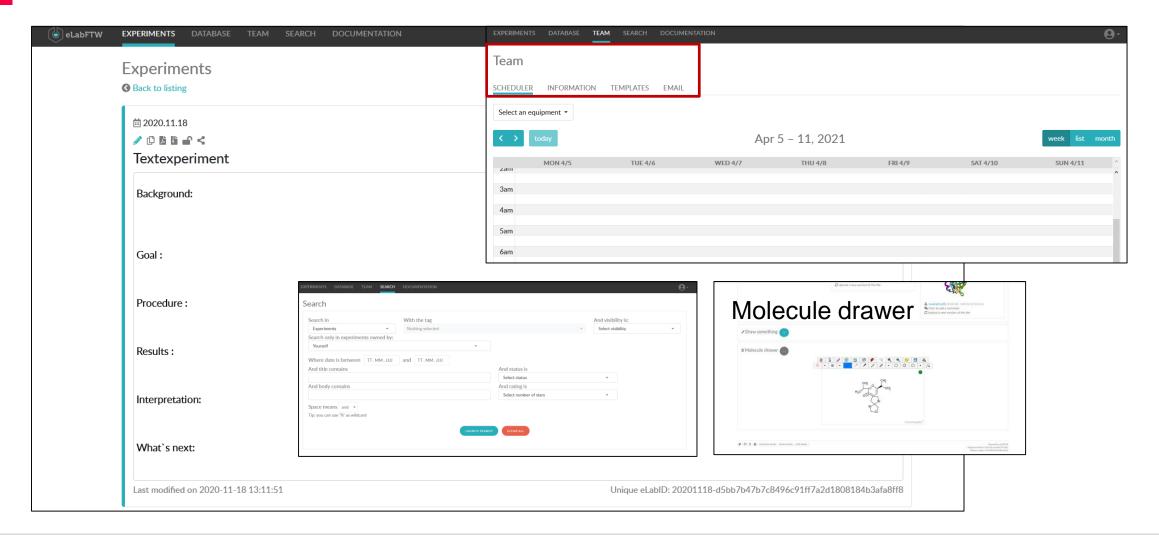


CyVerse Austria





elab FTW







Research Data Management Support @ Uni Graz



Christian Kaier
Graz University Library

June 8, 2021

Getting in touch



Christian Kaier University Library

- RDM Basics & Resources
- RDM Workshops
- DMP Support
- Connecting RDM services across the university

Research Data Management **Policy** of the University of Graz (2019) – Stakeholders

- University Library
- Vice Rector Research
- Vice Rector Finance
- Research Management & Service
- IT department
- Law & Organization
- Data Protection Officer
- Human Resources

- Faculty of Law
- Faculty of Social Sciences
- Faculty of Natural Sciences
- Digital Humanities
- AUSSDA Austrian Social Science Data Archive
- Doctoral Academy
- Works Council for Academic Staff
- e-infrastructures Austria PLUS

Research Data Management **Policy** of the University of Graz (2019)

Researchers are responsible for:

- a) submitting and updating data management plans (DMPs) [...]
- b) planning for possible future uses of the data. This includes defining usage rights and assigning appropriate licences.
- c) storing research data in a repository by no later than the date of completion of the research project.

[...]

Research Data Management **Support** at the University of Graz

Infrastructures:

- Discipline-specific: <u>AUSSDA</u>, <u>GAMS</u>, <u>Cyverse</u>
- No institutional data repository (yet)

Workshops:

- Research Data Management (generic)
- RDM and Good Scientific Practice

Research Data Management **Support** at the University of Graz

Consulting & Advice:

- <u>University Library/Publication Services</u> (DMP Support, Workshops)
- Research Management and Service (FWF/EU Projects)
- Uni-IT (Infrastructures incl Cyverse)
- Law & Organization, Human Resources Department, Data Protection Officer, Ethics Committee, ... (Legal Issues)





Thank you



- https://ub.unigraz.at/en/services/publication-services/
- <u>wb.publikationsservices@uni-graz.at</u>



RDM SUPPORT

Therese Macher

Intro

Medical University of Graz

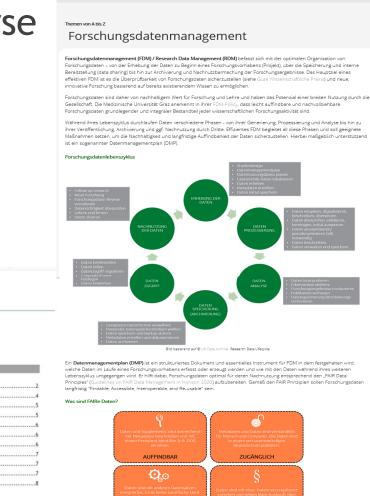
AnsprechpartnerIn

Quicklinks

- ▶ 1 Data Steward (11/2020)
- ► RDM info & support material in MUniverse
- ▶ Policies:
 - ► RDM Policy (02/2021)
 - ▶ Open Access Policy (04/2021)
 - Usage & Data Sharing Policy (almost finished)

die Umsetzung der Open Access Policy eine größere Sichtbarkeit, Verfügbarkeit und Nachnutzung sowie die

dauerhafte Zitierfähigkeit der Forschungsergebnisse der Med Uni Graz erreicht werden.



Miverse



4.2. Verantwortlichkeiten der Med Uni Graz.

RDM Support at Med Uni Graz



► RDM Quick Start Guide



Research Data Management (RDM) Quick Start Guide

- Get familiar with involved roles and responsibilities on data management at Med Uni Graz
- o Policy für Forschungsdatenmanagement, de
- o Research Data Management Info & Support, de
- Get familiar with the standards of good scientific practice at Med Uni Graz
- o Standards of Good Scientific Practice, en
- · Raise awareness for RDM issues and related concepts
- o Was ist FDM? (Forschungsdatenmanagement Bayern, Video, 03:59, de)
- o How to avoid a data management nightmare (NYH Health Sciences Library, Video, 04:46, en)
- o FAIR principles explained (Danish e-infrastructure Cooperation, Video, 02:09, en)
- o Open Access in 60 Sekunden (Technische Informationsbibliothek (TIB), Video. 01:15. del
- o Forschungsdaten.info (Informationsportal zu Forschungsdatenmanagement, de)
- · Get familiar with RDM & open science terms
- o Science Europe Data Glossary, en o Forschungsdaten.info Glossar, de
- Make a clear data management planning (DMP) for your research
- o Draft your DMP with support by the Science Europe "Practical Guide to the International Alignment of Research Data Management - Extended Edition", en
- Apply practical tips in data organization
- o Data best practices (Stanford Libraries), en
- File naming and folder hierarchy (MIT Libraries), en
- o Basics of GitHub Version Control System (freeCodeCamp, ~25 min read, en)
- Make proper data documentation & use (discipline specific) metadata standards
- o write SOPs (Standard Operating Procedure) for established methods and lab routines, en
- o makeareadme.com, en
- o apply generic or disciplinary metadata standards to describe your data, en
- Consider legal & ethical aspects regarding RDM and sensitive data
- o Understand data ownership at Med Uni Graz (see section 2 in our RDM-policy, de) Rechtlich sicher publizieren (MOOC der Uni Wien auf iMooX, de, Registrierung erforderlich!)
- o Med Uni Graz Data Protection, en
- o Datenschutzordnung der Med Uni Graz, de
- o Guidelines for Data protection and IT-Security at Med Uni Graz, en
- o FAQs zur Umsetzung der DSGVO at Med Uni Graz, de
- Best Practice Guide for Research Integrity and Ethics, Austrian Federal Ministry of Education, Science and Research (BMBWF), en, October 2020
- Ensure secure data storage, data analysis & sharing during the project
- o Plattformen für Datenaustausch und Datenablage der Med Uni Graz, de
- o MedBioNode (HPC Cluster for storage and analysis of omics data), en
- Galaxy project (for NGS data analysis), en
- o CyVerse Austria (data storage and analytical platform), en
- · Archive respectively publish your (licensed) research data in a trustworthy repository
- o Generic & discipline specific data repository recommendations (nature scientific data), en
- o Archivtaugliche Dateiformate (ETH-Bibliothek), de
- o FAQs zu Creative-Commons-Lizenzen unter besonderer Berücksichtigung der Wissenschaft (Einfrastructures Austria), de & en
- o Persistent identifiers and data citation explained (Research Data Netherlands, Video 04:51, en)

If you have any questions, want to give feedback or would like to seek further advice regarding RDM

please contact rdmsupport@medunigraz. Forschungsdatenmanagement/FOM

Guide "How to create your DMP"

DMP Feedback on request



How to create your Data Management Plan (DMP)

Version: 1.0

Source: content based on DMP guide "How to write an FWF data management plan (DMP)" from TU Wien (Center for Research Data Management) and the FDMentor TRAIN-THE-TRAINER Concept on RDM licensed under the Creative Commons Attribution 4.0 International (CC BY 4.0).

Date: May 6th, 2021

Medizinische Universität Graz

Forschungsdatenmanagement

Abteilung Forschungsdokumentation und -evaluierung Forschungsmanagement 8036 Graz, Auenbruggerplatz 2/9/IV

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"How to create your Data Management Plan (DMP)" Stand: 23 03 2021

Outlook

- ► RDM Training
 - ▶ Internal further education (WS 2021/22)
- ► RDM Tools & Infrastructure
 - ► maDMP
 - ▶ CyVerse
 - ▶ eLabFTW
 - ► Institutional Repository
 - ► InvenioRDM







CONTACT

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Data Steward

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□ rdmsupport@medunigraz.at

https://muniverse.medunigraz.at/Seiten/Forschungs datenmanagement.aspx





Question 1 @Christian Kaier: At the KFU, where am I supposed to store my data? On which server for example?

In principle there is a huge differnce between storage and archiving of research data. Storage is supported by the IT department at Uni Graz whereas archiving is done in a research data repository as mentioned by Katharina Rieck before.

Question 2: Are you implementing any kind of electronic laboratory notebook in your lab?

We offer electronic lab notebooks for the BioTechMed universities. The solution we offer is called elabFTW. In case you want more information, just drop me an email: Sarah.Stryeck@tugraz.at

Question 3 @Christian Kaier: In the FWF DMP there is a question "Who owns the data?". Could you please comment on how to answer this question for the case of KFU? Thank you!

We discussed this question during the creation/adaption of the policy; for now we agreed that as long as their employment contracts do not state anything different the data "belong to" the researchers who created them.... but this handled differently in different institutions and countries ...



SAVE THE DATE

SUPPORT IN RESEARCH DATA MANAGEMENT. LATEST DEVELOPMENTS

https://forschungsdaten.at/en/fair-data-austria/materials/support-in-research-data-management-latest-developments/

24. June 2021, 1:00-3:00 pm, online





THANKS FOR YOUR ATTENTION & PARTICIPATION!

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