

# Research Data Management and Central Service Facilities: eResearch Services for researchers at UMG

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# Agenda

1. Management of research data
2. The Göttingen eResearch Alliance
  - 2.1. Division Library Medicine (SUB)
  - 2.2. Computing-Services (GWDG)
3. Core facilities at the UMG
4. Ethikkommission at the UMG
5. Data protection officer at the UMG
6. Advisory services at the Department of Medical Informatics
7. Services at the Medical Statistics / Medical Bioinformatics
8. Services of the Central Biobank UMG

# Example: CRC 1002

## Electronic laboratory notekeeping



### Paper lab notebook

OCTOBER 15 1998

DIGEST:


2 µl p116 Met25    2.5 µl p6EM6.2HA Eno24/AA  
 4.5 µl UNIVERSAL B    4.5 µl UNIVERSAL B  
 22.5 µl H<sub>2</sub>O    22.5 µl H<sub>2</sub>O  
 0.5 µl BstHI    0.5 µl BstHI  
 0.5 µl EcoRI    0.5 µl EcoRI  
 → D CIP

LIGAS:

6 µl p116 Met25  
 2 µl Eno24/AA / H<sub>2</sub>O  
 1.9 µl H<sub>2</sub>O  
 3 µl T4-LIG B  
 0.5 µl T4-LIGASE

AND TRANSFORM AFTER 4h OF LIGATION

DIGEST TEMPLATE-DNA FOR MAKING RNA:




### Electronic lab notebook (ELN)

Close Save as Template Delete Sign

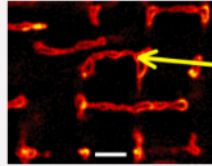
Home / AG Lehnart Demo / Experiments / Experiment 1 based on Template AG Lehnart STED Microscopy Image Acquisition

Name: Experiment 1 based on Template AG Lehnart STED Tags: di-8-ANEPPS, STED, Microscopy, Fluorescence SD381

Microscopy Image Acquisition

Publication Tag Search... AND OR Add Go

Wagner et al. 2012



**Signal**

```
<field id="229625">
<fieldName>Primary antibody</fieldName>
<fieldType>STRING</fieldType>
<lastModifiedDate>2015-08-26</lastModifiedDate>
<fieldData>https://hdl.handle.net/11022/umg-sfb1002-antibody-primary-119</fieldData>
```

Audit: My RSpace Activity  
 You can filter this audit by Actions and Date Range  
 Get Audit Report

You found 482 hits.

Dye	Time	User	Action	Type	Resource	Name
di-8-ANEPPS	2016-04-21 15:38:12	Dr. Harald Kusch	READ	RECORD	SD381	Experiment 1 based on Template AG Lehnart STED Microscopy Image Acquisition
Excitation in nm	2016-04-21 12:21:12	Dr. Harald Kusch	READ	RECORD	SD366	Experiment 1 based on Template - AG Lehnart - Western Blot - Immuno detection for Western Blotting
490	2016-04-21 11:54:56	Dr. Harald Kusch	DELETE	RECORD	SD499	Untitled document
	2016-04-21 11:54:56	Dr. Harald Kusch	DELETE	RECORD	SD505	Untitled document
laser	2016-04-21 11:42:08	Dr. Harald Kusch	READ	RECORD	SD353	Template - AG Lehnart - Western Blot - Immuno detection for Western Blotting

pulsed diode laser (Pico TA 490, Toptica)

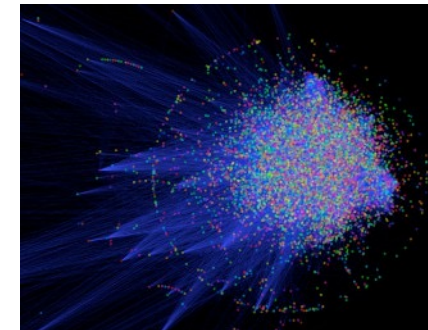
# 1. Management of Research Data



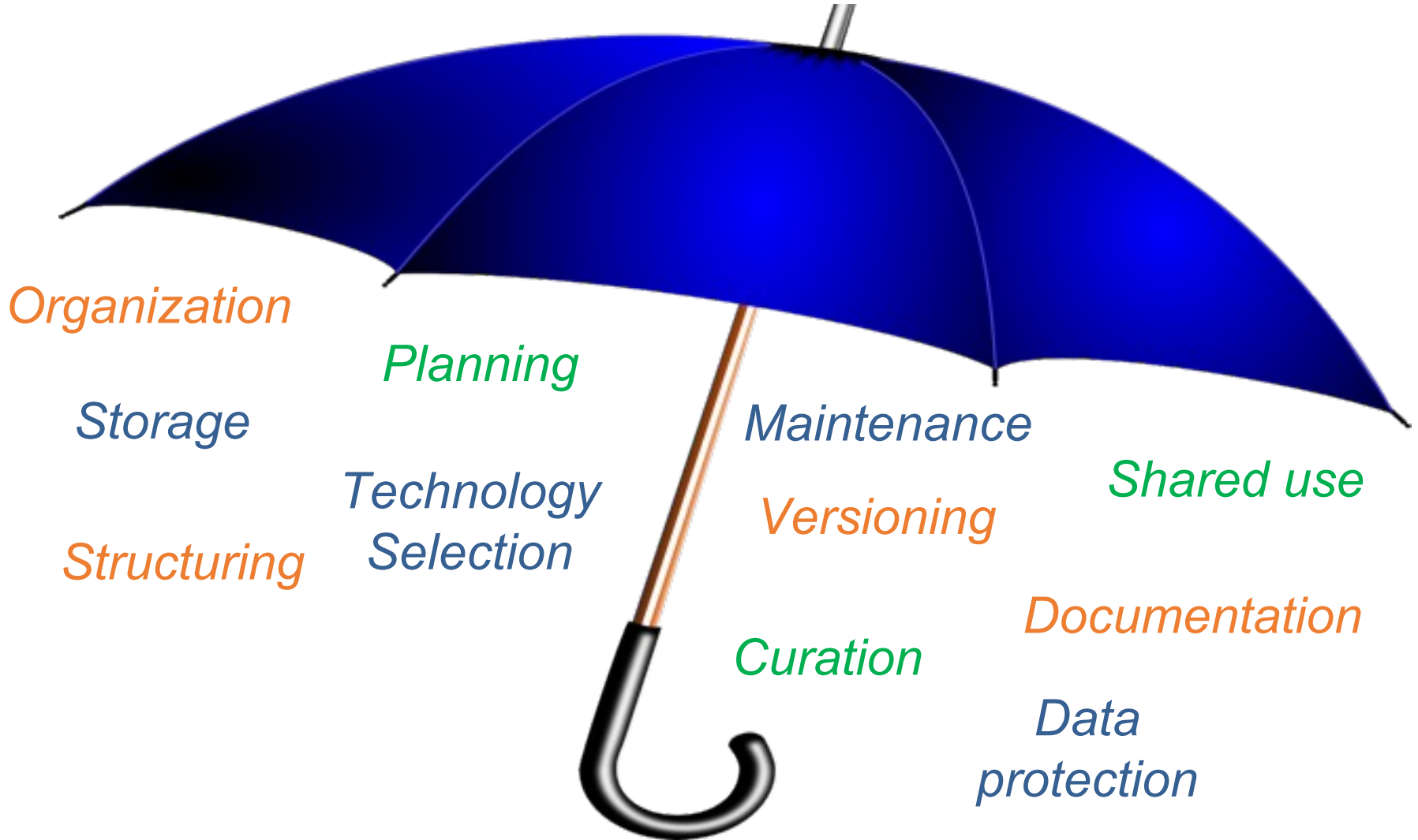


Data are **representations** of observations, objects, or other entities used as **evidence** of phenomena for the purposes of research or scholarship.

*(Christine Borgmann 2014)*



# What is research data management?



# Basic questions I

## Organization and storage

- Can you find, access and use what you need when you need it?
- Are your data stored safely? Have you implemented a backup plan?



# Basic questions II

## Documentation

- Is the meaning of all the data and processing steps known, documented, findable and accessible?
- Is the information still understandable, when you revisit the data at a later time?



# Thinking ahead...

## Curation and sharing

- Is there a long term plan for the data?
- Can the data be made available for other researchers?
  - Funder's requirements
- Is there a repository or archive where you can store your data?
- What do you need today to support this and ease your daily work?



# Research Data Policy of Göttingen University incl. UMG



Göttingen eResearch Alliance

Focus areas

Current page: ▶ Homepage ▶ 28. August 2014: Res...

Aa+ Aa-



Search | Deutsch

## 28. August 2014: Research data policy of the Georg-August University Goettingen (incl. UMG)

### Preamble:

The Georg-August-University Goettingen is committed to diligently preserve results of scholarship, to produce novel results through research, and to make results accessible and reusable for academia and the wider society, now and for future generations. The management, protection, preservation and sustainable provision of research data must therefore be carried out in accordance with recognized standards, meet high expectations and fulfil legal and ethical obligations. The University acknowledges that the implementation of this guideline will depend on the settings and requirements of each subject area.

1. The University promotes and supports open access to research data.
2. Research data are those data collected, observed, simulated, derived, or generated during the course of research.
3. Management of research data includes their planning, collection, processing, and preservation. It ensures the access to, and the reuse, reproducibility, and quality assurance of all research data underpinning research results.
4. Research data management is generally the responsibility of the person leading a project and the researcher who is acting in an individual capacity. A particular responsibility is the adherence to good practices of research as well as standards in their subject area.
5. Research projects with research data require a data management plan that includes but is not restricted to the topics of access rights to research data and necessary precautions for handling them.
6. The University provides support and advice for research data management in the preparatory stages of research projects, during their conduct and after their completion, and provides appropriate training.
7. The University implements and maintains essential services for research data infrastructure that ensures adequate storage and technical availability of digital research data. Specific requirements have to be aligned among all stakeholders and may involve additional funding.
8. Storage and archiving of digital research data is carried out within the technological and informational infrastructure of the University or in acknowledged external or internal subject repositories.
9. The University and its researchers adhere in their research data management to given conditions of ethics, data protection, intellectual property, privacy and disclosure. This leaves regulations untouched that relate to an assessment of research data according to the German employee invention act and specific contractual agreements.
10. If exploitation or publication rights of data were transferred to third parties, it should be a precondition that research data remain openly and freely available for research purposes.

# Research Data Policy of Göttingen University incl. UMG

- Officially issued on 28th August 2014
- One of the first German universities with such a policy

## Topics addressed:

### Preamble:

- Research Data, Research Data Management and its purposes
- Data Management Plans
- Support, training and provision of services
- Storage location
- Ethical and legal standards
- Open Access

## eResearch Alliance: support and advice on the implementation of the policy for the Göttingen Campus

eResearch = *enhanced*Research

## 2. eResearch Alliance



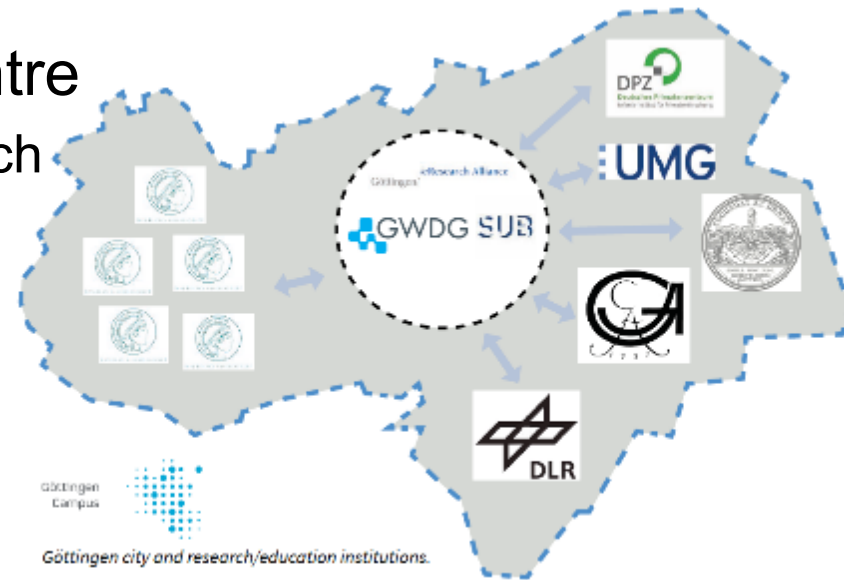
# eResearch Alliance

- Run **jointly** by Library and IT-Centre

- GWDG: ~150 people, 30 in eResearch
- SUB: ~450 people, 40 in eResearch

- Close **cooperation** with

- Department of Medical Informatics
- Research Department



- **Brokering-Office** with currently 5 staff members

- Team from different disciplines with eResearch expertise
- Actual services and projects in individual organisations
- Network with eResearch experts across the campus
- Translate discipline-specific requirements into information-infrastructure tasks

# eRA Services

## Consulting

- Data management requirements
- Data integration
- Data policies
- DMPs
- Legal aspects
- Expert network
- ...

## Training

- Data management
- eResearch topics
- Digital literacy
- Expert network
- Open Science
- ...

## Digital Services

- Storage
- Computing
- Communication
- Cooperation
- Project participation
- Foster reuse of solutions
- Sustain solutions
- Development of new services
- ...

# Open Science Göttingen

- Campus wide network on promoting Open Science
- Göttingen Open Science MeetUp
  - Open Science principles
  - Teaching
  - Data science
- “HackyHour”: Meet, discuss, experiment together with experts on a given topic

<https://pad.gwdg.de/s/OpenScienceGOE#>

<https://hackyhour.github.io/Goettingen/>



# GÖTTINGEN RESEARCH ONLINE

## Publications

Publication data management

*Dspace-CRIS*

## Data

Research data repository

*Dataverse*

## Instruments

Large equipment portal

*openIRIS*

## Plan

Data management planning

*RDMO*

...

more services

# GÖTTINGEN RESEARCH ONLINE

## GRO.data

- Research Data Repository
- Based on Dataverse
- For all disciplines
- Storage, exchange, publication
- DOIs
- Individual management of access rights and roles

The screenshot displays the Göttingen Research Online (GRO) website. At the top, there is a navigation bar with 'GÖTTINGENRESEARCH-ONLINE', 'Search', 'User Guide', 'Support', and 'Log In'. Below this, a 'Metrics' section shows '622 Downloads'. The main heading reads 'Publish your research data! Search, find, and cite data from the Göttingen Campus and beyond.' A brief description follows: 'Göttingen Research Online is an institutional repository for the publication of research data at the Göttingen Campus. It is managed by the Göttingen eResearch Alliance, a joint group of SUB and GWDG. If you are interested in publishing your data here, please see our author instructions and get in touch with us. See our Quick Start Guide'. A search bar is present with 'Search this dataverse...', 'Find', 'Advanced Search', and 'Add Data' buttons. On the left, there are filters for 'Dataverses (11)', 'Datasets (22)', and 'Files (214)'. Below these are filters for 'Dataverse Category' (Research Project (6), Researcher (3), Department (1), Research Group (1)), 'Publication Year' (2019 (19), 2018 (13), 2017 (1)), 'Author Name' (Hoffmann, Ellen (5), Claudia Engelhardt (3), Elsner, Ines (3), Inga Kraus (3), Kusch, Harald (3)), 'Subject' (Medicine, Health and Life Sciences (14), Arts and Humanities (7), Agricultural Sciences (6), Other (4), Physics (2)), and 'Keyword Term' (Applied Art (3)). The main content area shows '1 to 10 of 33 Results' with a 'Sort' dropdown. The first result is 'Image review on mobile devices for suspected stroke patients: Evaluation of the mRay® software solution' by Alex Brehm, dated May 14, 2019. The second result is 'Alex Brehm Dataverse (Dienste der GWDG)' also dated May 14, 2019. The third result is 'PDF Copy Of Online Survey' by GRACe, dated May 3, 2019. The fourth result is 'Survey results' by Dehradun Dataverse, dated Mar 20, 2019. The fifth result is 'Kandai-images' by Dehradun Dataverse, dated Mar 20, 2019.

# GÖTTINGEN RESEARCH ONLINE

## GRO.publications

- Publication Data Repository
- Based on DSPACE-CRIS
- Researcher profiles
- ORCID connection
- Export to various formats and citation styles
- Selectable presentation through embedded links

The screenshot displays the GRO Publications search results page. At the top, there is a navigation bar with 'GÖTTINGEN RESEARCH ONLINE PUBLICATIONS' and links for 'GRO', 'Help', 'Login', and 'DE'. Below the navigation bar, there are tabs for 'Publications', 'Researcher', and 'Journals'. A search bar is located on the right side of the navigation bar. The main content area is titled 'Publications' and features a search input field, a 'Search' button, and a 'Reset' button. Below the search bar, there is a link to 'Add Filters' and a pagination indicator showing '1-50 of 64954' results. The pagination controls include '< previous', '1', '2', '3', '4', '...', '1300', and 'next >'. The search results list three entries, all dated 2021:

- 2021 | Conference Paper**  
Die Sackgassen des Humiliationismus in Metaphysik oder Positivismus  
Gisbertz-Astolfi, P. (2021)  
In: U. Neumann; P. Tiedemann & S. I Liu (Eds.), Menschenwürde ohne Metaphysik pp. 63-74. 29th IVR World Congress: Workshop "Menschenwürde ohne Metaphysik", Luzern.  
Archiv für Rechts- und Sozialphilosophie - Beihefte: Steiner Verlag.  
Details
- 2021 | Book Chapter**  
Art. 53 – Der Bundesrat, Teilnahme der Bundesregierung  
Schwerdtfeger, A. (In Press)  
In: I. von Münch; P. Kunig; J. A. Kämmerer & M. Kotzur (Eds.), Grundgesetz-Kommentar: GG. (7. ed.). C. H. Beck.  
Details
- 2021 | Book Chapter**  
Art. 137 – Beschränkung der Wählbarkeit von öffentlich Bediensteten

On the right side of the search results, there is a 'Filter' section with the following options:

- Type: Select Type ▾
- Date issued: Select Date ▾
- Author: Select Author ▾
- Subject: Select Subject ▾
- Publication Affiliation: Göttingen University ▾

# GÖTTINGEN RESEARCH ONLINE

## GRO.instruments

- Campus-wide registration and administration of large equipment
- Central information hub for researchers and administration
- Booking functionality for researchers on campus

The screenshot displays the eResearch Alliance website interface for GRO.instruments. At the top, the navigation menu includes 'Resources', 'Providers', 'People', 'Groups', 'Departments/institutes', 'Organizations', 'Projects', and 'Communities'. A user profile 'era@gwdg.de' is visible in the top right corner. Below the navigation, there is a 'Filter' sidebar with dropdown menus for 'Type', 'Country', 'Organization', 'Provider', and 'Category', each with 'Submit' and 'Reset' buttons. A 'NEW RESOURCE' button is located at the bottom of the filter sidebar. The main content area features a grid of resource cards, each displaying the name, provider, affiliation, and resource type of various instruments. A search bar is positioned above the grid. Below the grid, there are sections for 'Resources' and 'Facilities', each with a brief description and an 'Explore...' link. At the bottom, a 'Statistics' section shows icons and counts for users (368), resources (274), providers (39), and organizations (6). A 'Sign in / Register' button is located in the top right corner of the main content area.



# GÖTTINGEN RESEARCH ONLINE

## GRO.plan

- Data management planning tool
- Based on RDMO
- Versioning and sharing of DMPs
- Goal: campus-specific support

The screenshot displays the 'My Projects' page on the Göttingen Research Online (GRO) website. The page header includes the logo 'GÖTTINGEN RESEARCH ONLINE PLAN' and navigation links for 'Language' and 'My account'. The main content area is titled 'My Projects' and contains a brief introduction: 'In order to start creating a Data Management Plan (DMP), you first need to create a "Project" with a project title, a brief description of your research question(s) or research field, and a catalog of questions for creating the DMP which you can select from a prepared list. Click on "Create new project" below to do so, or click on an already existing project name in the list below to access the project's information.' Below this text is a table with columns: 'Project name', 'My GRO.plan role', 'Creation Date', 'Last updated', 'Selected Catalog', and 'Quick Links'. A 'Create new project' button is located below the table. To the right of the table, there is a 'My personal data' section with fields for 'Name' (Timo Gnad), 'Email' (gnadt@sub.uni-goettingen.de), and a 'Search projects' section with a search input field. Below the search field is an 'Import as new project' section with a 'Select file' button and an 'Upload' button. The footer of the page is divided into three columns: 'About' (with links for 'About RDMO', 'Terms and Conditions', 'Privacy', and 'Imprint'), 'Contact' (with 'Support Team: Göttingen eResearch Alliance' and 'info@eresearch.uni-goettingen.de'), and 'Göttingen Research Online' (with a description of the service and links for 'GRO.data (research data repository)', 'GRO.instruments (large equipment portal)', and 'GRO.publications (publication data repository)').



We support Göttingen Campus researchers with services, best practice trainings and consultations on research data management and eResearch topics

### For Researchers

Find support in [planning your data management](#), get information on how to [store, share and publish your research data](#), use [Göttingen Research Online \(GRO\) services](#) or collaborate with [partners on campus](#).

### For Students

Learn about eResearch topics in our [Explain! section](#). Become informed on how to request a [training event for your group](#) or use our [training material](#).

### For Technical Staff

Check out our [Service Catalogue](#) for eResearch services at the Göttingen Campus or find eResearch offers and solutions from [other organisations](#).

We are here to help you with ...

- > [Know-how about storing, sharing, publishing or citing data](#)
- > [Organizing training measures on Research Data Management \(RDM\)](#)
- > [Getting support for publishing Open Access](#)

On our pages you find...

- > [Information on available services > service catalog](#)
- > [Policies and funders' requirements regarding RDM](#)
- > [Advice on legal or ethical aspects concerning research data](#)

GET IN TOUCH

[www.eresearch.uni-goettingen.de](http://www.eresearch.uni-goettingen.de)

## **2.1 Division Library Medicine (SUB)**

Dagmar Härter



NIEDERSÄCHSISCHE STAATS- UND  
UNIVERSITÄTSBIBLIOTHEK GÖTTINGEN

## **Research, Data, Management: Data management basics and services for your daily research routine at the UMG**

**Support and Services at the Medical Library**



GEORG-AUGUST-UNIVERSITÄT  
GÖTTINGEN

# BBM / SUB Göttingen

Göttingen State and University Library > News Deutsch

## News

- Service monitor & FAQ
- First-time visitor?
- Contact
- Locations & facilities
- Borrowing & renewing

### SUB news

#### Scan & Deliver orders soon possible directly in the Göttingen University Catalogue (GUK)

To further simplify orders for the Scan & Deliver service, from tomorrow, Wednesday 29 April, you can order the desired scans simply via the [Göttingen University Catalogue \(GUK\)](#) with your user account. [Read more >](#)

#### Gradual opening of our locations

Good news everyone!  
We are planning a gradual opening of our locations - of course in compliance with

**Service monitor**

**COVID-19**

**Quick links**

- Access e-journals & e-books
- Additional and test offers

At [www.sub.uni-goettingen.de](http://www.sub.uni-goettingen.de) you can find all information regarding the SUB, including all service offers online and offline

# Accessing electronic resources from home?

**Elektronische Zeitschriftenbibliothek**  
Niedersächsische Staats- und Universitätsbibliothek Göttingen

Zugangs- und Benutzungshinweise / Nutzungsbedingungen **Aktuelle Informationen zu Zeitschriften von Elsevier und Cell Press** Datenbank-Infosystem (DBIS)

**Zeitschriften**  
Zeitschriftensuche  
Liste nach Fachgebiet  
Liste nach Alphabet  
Liste neuer EZB Titel

**Bibliothek**  
Ansprechpartner  
Zeitschrift vorschlagen  
Bibliothek auswählen

**Information & Service**  
Über die EZB  
Hilfe zur EZB  
EZB Dienste

**Zeitschriftenliste nach Fachgebiet**

Fachgebiet	Anzahl
Allgemeine und vergleichende Sprach- und Literaturwissenschaft, Indogermanistik, Außereuropäische Sprachen und Literaturen	3143
Allgemeines, Fachübergreifendes	7533
Anglistik, Amerikanistik	1404
Archäologie	1217
Architektur, Bauingenieur- und Vermessungswesen	2319
Bildungsgeschichte	412
Biologie	5597
Chemie und Pharmazie	2926
Elektrotechnik, Mess- und Regelungstechnik	1581
Energie, Umweltschutz, Kerntechnik	2345
Ethnologie (Volks- und Völkerkunde)	1556
Geographie	1283
Geowissenschaften	2240
Germanistik, Niederländische Philologie, Skandinavistik	439
Geschichte	4817
Informatik	4041
Informations-, Buch- und Bibliothekswesen, Schrift- und Handschriftenkunde	1575
Klassische Philologie, Byzantinistik, Mittellateinische und neugriechische Philologie, Neulaten	518
Kunstgeschichte	2039
Land- und Forstwirtschaft, Gartenbau, Fischereiwirtschaft, Hauswirtschaft, Ernährung	4037
Maschinenwesen, Werkstoffwissenschaften, Fertigungstechnik, Bergbau u. Hüttenwesen, Verkehrstechnik, Feinwerktechnik	2350
Mathematik	2419
Medien- und Kommunikationswissenschaften, Publizistik	1422
Medizin	14989

**Die Volltexte der Zeitschriften sind**

- frei zugänglich
- für Angehörige der Uni Göttingen freigeschaltet
- nur für einen Teil der erschienenen Jahrgänge zugänglich
- nicht zugänglich, nur Inhaltsverz./Abstracts

[Nutzungsbedingungen](#)

As a member of the UMG you just have to order a password for your member card. You find the button on our homepage.

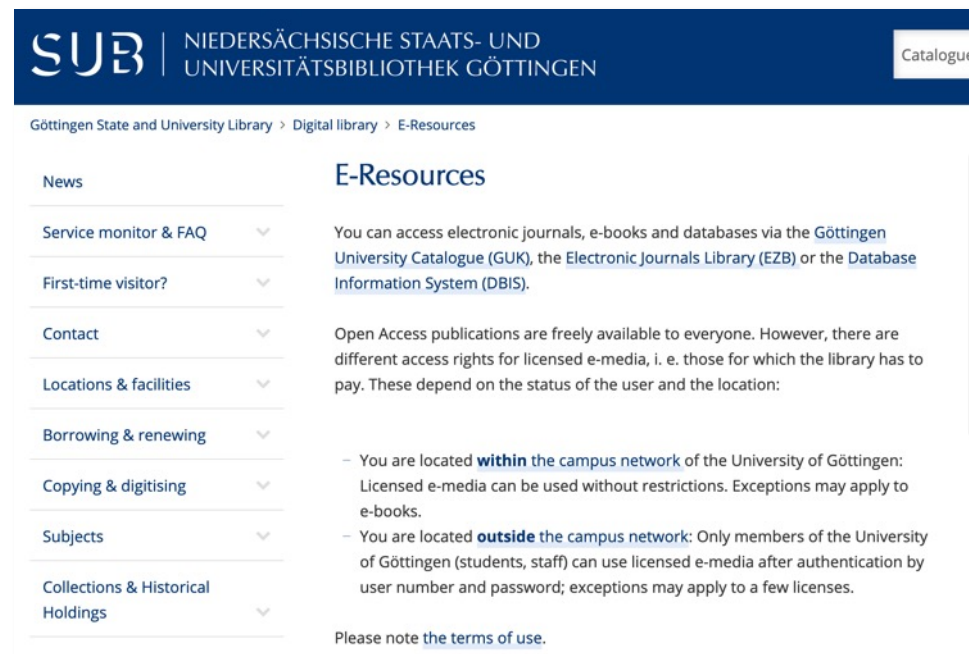
On the SUB homepage you can then access all electronic resources via the search bar, if you are logged in with your credentials (user number and password)



# Accessing electronic resources from home?

Here you will find the conditions of access and use, whether to access electronic resources from home or from outside the campus network:

<https://www.sub.uni-goettingen.de/-ML3Uj>



The screenshot shows the website of the Niedersächsische Staats- und Universitätsbibliothek Göttingen (SUB). The header includes the SUB logo and the text "NIEDERSÄCHSISCHE STAATS- UND UNIVERSITÄTSBIBLIOTHEK GÖTTINGEN". A "Catalogue" button is visible in the top right corner. The main content area is titled "Göttingen State and University Library > Digital library > E-Resources". On the left, there is a navigation menu with items: News, Service monitor & FAQ, First-time visitor?, Contact, Locations & facilities, Borrowing & renewing, Copying & digitising, Subjects, and Collections & Historical Holdings. The main content area is titled "E-Resources" and contains the following text: "You can access electronic journals, e-books and databases via the Göttingen University Catalogue (GUK), the Electronic Journals Library (EZB) or the Database Information System (DBIS). Open Access publications are freely available to everyone. However, there are different access rights for licensed e-media, i. e. those for which the library has to pay. These depend on the status of the user and the location: - You are located **within** the campus network of the University of Göttingen: Licensed e-media can be used without restrictions. Exceptions may apply to e-books. - You are located **outside** the campus network: Only members of the University of Göttingen (students, staff) can use licensed e-media after authentication by user number and password; exceptions may apply to a few licenses. Please note the terms of use."

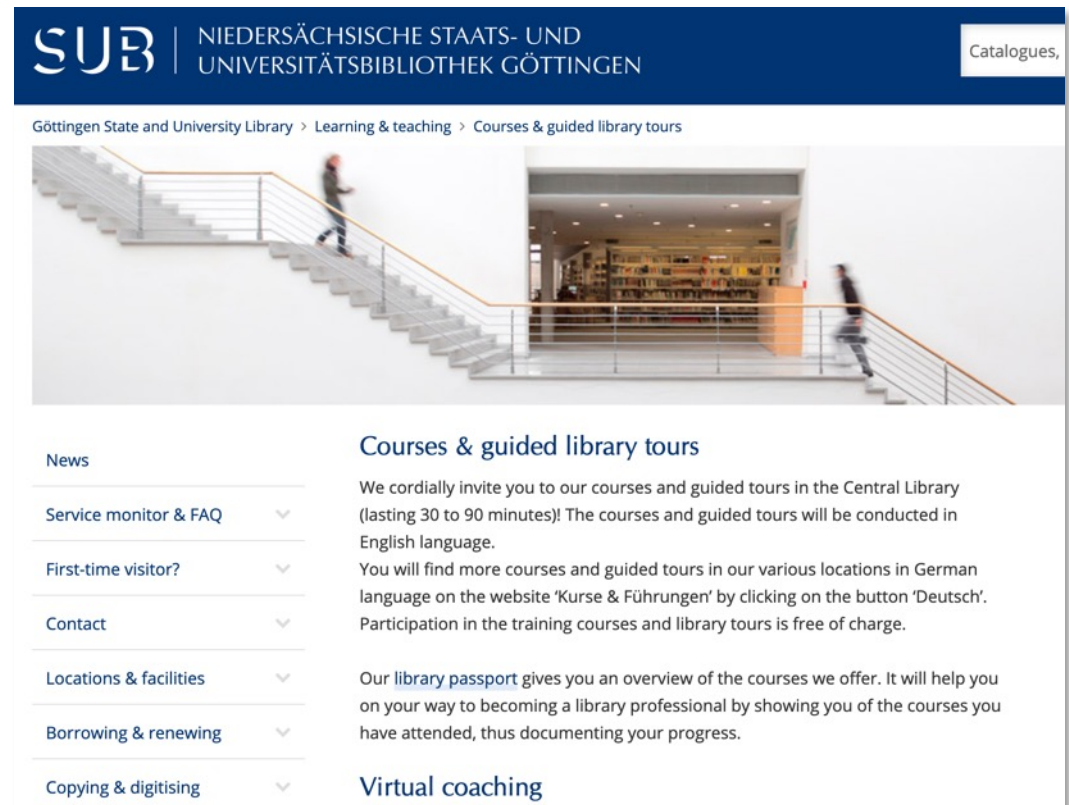
## Current information on courses and library offers can be found here:

<https://www.sub.uni-goettingen.de/-cJTgW>

Many offers are already available as online services. Please refer to the current information on the SUB homepage and on our course page. These offers are also communicated in the library newsletter.

You can also subscribe to the library newsletter on the UMG homepage:

<https://www.umg.eu/studium-lehre/studieren-an-der-umg/lernunterstuetzung/>



The screenshot shows the website header for the SUB (Niedersächsische Staats- und Universitätsbibliothek Göttingen). The main navigation bar is dark blue with the SUB logo and the text 'NIEDERSÄCHSISCHE STAATS- UND UNIVERSITÄTSBIBLIOTHEK GÖTTINGEN'. A white box on the right contains the text 'Catalogues,'. Below the header, a breadcrumb trail reads 'Göttingen State and University Library > Learning & teaching > Courses & guided library tours'. The main content area features a large photograph of a modern library interior with a wide staircase and a person walking. Below the photo, there is a sidebar on the left with a 'News' section and a list of links: 'Service monitor & FAQ', 'First-time visitor?', 'Contact', 'Locations & facilities', 'Borrowing & renewing', and 'Copying & digitising'. The main content area on the right is titled 'Courses & guided library tours' and contains the following text: 'We cordially invite you to our courses and guided tours in the Central Library (lasting 30 to 90 minutes)! The courses and guided tours will be conducted in English language. You will find more courses and guided tours in our various locations in German language on the website 'Kurse & Führungen' by clicking on the button 'Deutsch'. Participation in the training courses and library tours is free of charge. Our library passport gives you an overview of the courses we offer. It will help you on your way to becoming a library professional by showing you of the courses you have attended, thus documenting your progress.' Below this text is a section titled 'Virtual coaching'.

# Online offers for download:



Göttingen State and University Library > Learnii

News

First-time visitor?

Contact

Locations & facilities

Borrowing & renewing

Copying & digitising

Subjects

Collections & Historical Holdings

Digital library

Electronic publishing

Learning & teaching

Academic work: tools and methods

Courses & guided library tours

**Self-study materials**

Individual & group work spaces

Textbooks & semester

- [Bibliotheksralie für Studierende der Politik-, Sozial- und Wirtschaftswissenschaften](#)
- [Kursunterlagen zum Herunterladen \(PDF 514 KB\): Einführung in die Literaturrecherche für Studierende der Sportwissenschaften](#)
- [Von der Literaturliste zum Buch: Information für Studienanfängerinnen und Studienanfänger der Wirtschaftswissenschaften \(PDF 1,5 MB\)](#)
- [Zotero-Kursunterlagen zum Herunterladen: Einführung in Zotero mit sozialwissenschaftlichen Beispielen](#)

## Medizin

- [Bibliotheksralie für die Bereichsbibliothek Medizin \(PDF 376 KB\)](#)
- [Endnote-Selbstlernkurs für Medizin-Studierende zum Herunterladen](#)
- [Endnote Self-Study Material for Medical Students \(PDF 648 KB\)](#)
- [Literaturrecherche für Medizin-Studierende: Wo Sie finden, was Sie suchen! \(PDF 1,3 MB\)](#)
- [PubMed for medical students \(PDF 2,5 MB\)](#)
- [PubMed für Medizin-Studierende \(PDF 3,2 MB\)](#)
- [Zotero-Kursunterlagen zum Herunterladen: Zotero-Selbstlernkurs für Medizinstudierende](#)
- [Zugriffsmöglichkeiten auf Volltexte von Zeitschriftenaufsätzen für Medizin-Studierende \(PDF 2,0 MB\)](#)

[Sitemap](#) [Kontakt](#) [Impressum](#) [Datenschutzhinweis \(Opt-Out\)](#)

Click on  
„Learning & Teaching“  
-> „Self-study materials“



Then scroll down to  
„Medicine“

[Feedback](#) [Short URL](#)

### SUB Göttingen

- Benutzerkonten
- Öffnungszeiten
- Bücherwunsch für Studierende
- Kurse & Führungen
- [SUB bei Facebook](#)
- [SUB bei Twitter](#)
- [SUB bei Instagram](#)
- [Ihre Meinung](#)
- [Frag die SUB](#)

### Universität Göttingen

- Universität Göttingen
- UniVZ
- Lageplan zur Barrierefreiheit
- eCampus mit Stud.IP
- studIT Online Support
- Göttinger Bibliotheken
- Mensa-Speisepläne
- GWDG

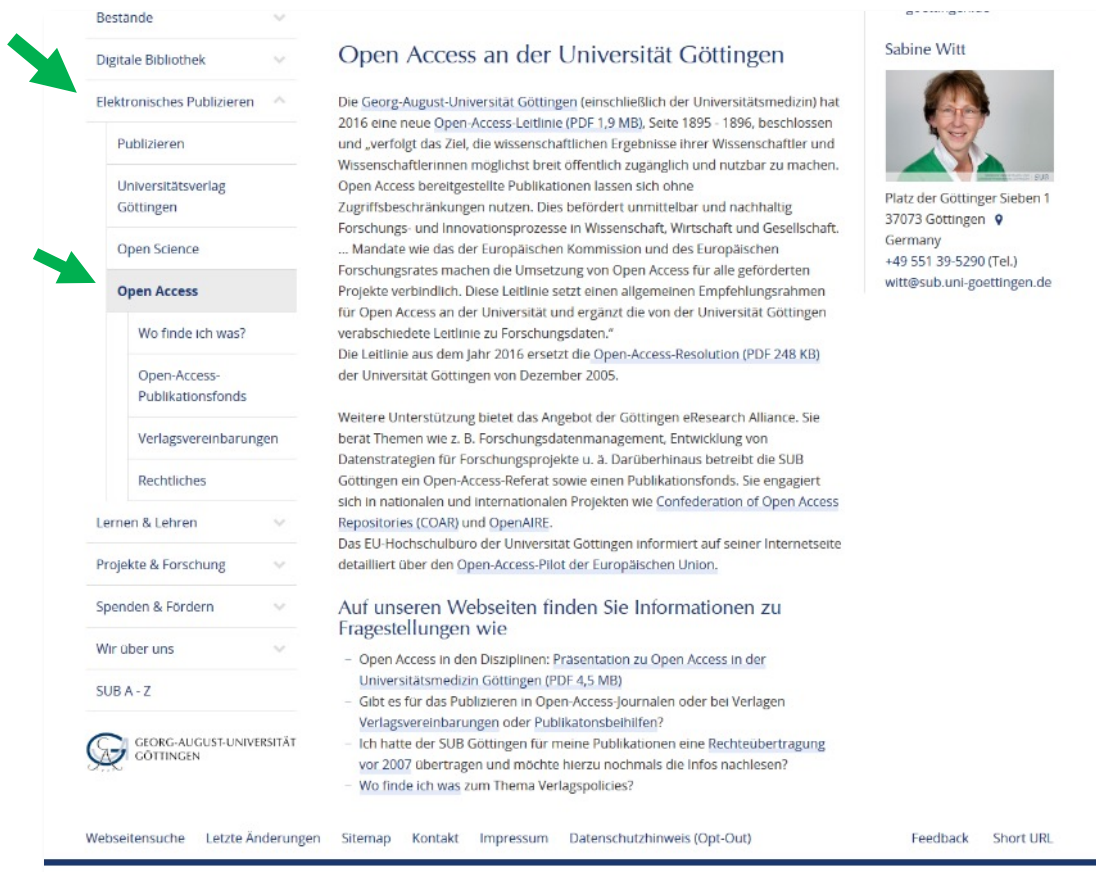
### Stadt Göttingen

- Willkommen in Göttingen
- Stadtplan
- Verkehrsverbindungen
- [studieren-in-goettingen.de](#)

Letzte Änderung 25.10.2018



# Open Access consultation



The screenshot shows the SUB Göttingen website. On the left, a navigation menu is visible with the following items: Bestände, Digitale Bibliothek, Elektronisches Publizieren (expanded), Publizieren, Universitätsverlag Göttingen, Open Science, **Open Access** (highlighted with a green arrow), Wo finde ich was?, Open-Access-Publikationsfonds, Verlagsvereinbarungen, Rechtliches, Lernen & Lehren, Projekte & Forschung, Spenden & Fördern, Wir über uns, and SUB A - Z. The main content area is titled 'Open Access an der Universität Göttingen' and contains text about the university's Open Access policy, including links to the 2016 and 2005 guidelines. A sidebar on the right features a profile for Sabine Witt, with contact information: Platz der Göttinger Sieben 1, 37073 Göttingen, Germany, +49 551 39-5290 (Tel.), and witt@sub.uni-goettingen.de. The footer includes 'Webseitensuche', 'Letzte Änderungen', 'Sitemap', 'Kontakt', 'Impressum', 'Datenschutzhinweis (Opt-Out)', 'Feedback', and 'Short URL'.

On the SUB homepage, click on „Electronic Publishing“ -> „Open Access“

Here you can find all our services and offers on the topic of publishing Open Access

## Research support / Virtual coaching

<https://pad.gwdg.de/ResearchSupport#>

The SUB offers individual consultation hours on various topics, such as:

- finding relevant literature
- academic writing process
- organizing sources
- Word/Excel questions
- statistical methods
- handling research data

### Research Support



Having trouble finding relevant literature for your term paper or thesis? Feeling like you're losing track of your ideas and struggling with structuring your essay? Problems quoting or formatting in MS Word or MS Excel? Your reference management programme isn't doing what you want it to?

The Research Support is here to help you! Find answers to all of your questions to complete your term paper or thesis quickly and successfully.

### Time and place

## Also to use for free: The library's makerspace



3D printer for testing purposes

3D anatomy table for virtual dissection



## (Almost) Always there for you:

- Monday – Friday from 8 – 24
- Saturday, Sunday and Holidays from 8/10 – 22/20
- By phone: 39-8395
- By email: [bbmed@sub.uni-goettingen.de](mailto:bbmed@sub.uni-goettingen.de)



- <https://www.sub.uni-goettingen.de/en/locations-facilities/locations-and-opening-hours/medical-library/>

## **2.2. Computing Services (GWDG)**

Prof. Dr. Philipp Wieder





Erhalten Sie dynamische Rechenleistung, Anwendungen oder IT-Dienste, die mit Ihren Anforderungen wachsen.

# GWWDG CLOUD SERVER

The banner features a central white cloud against a blue background with binary code (0s and 1s) and glowing server racks. On the left and right sides, there are images of a tablet and a laptop, respectively, both displaying binary code. Navigation arrows (back and forward) are visible on the left and right edges of the banner area.

Professor Dr Philipp Wieder

Gesellschaft für wissenschaftliche Datenverarbeitung mbH

- **Public authority: Göttingen University & Max Planck Society**
- **Operation of Computing Center, parallel computers, networks, Campus-WLAN**
- **~ 150 Employees, > 20.000 WLAN devices online per day, certified acc. to ISO 9001**
- **IT-research institution**
  - Leadership and Participation in national and international research projects
  - Research Leitung- und Mitarbeit in nationalen und internationalen Forschungsprojekten
  - Research foci:
    - Data management & electronic research infrastructure
    - Virtual research environment & innovative digital tools
    - Data analysis, visualisation and big data technologies
    - Cloud Computing
    - Next-Generation Networking

## SERVICES

### Storage Services

- Data Archiving
- Backup
- File Service
- GWDG ownCloud
- Cryptshare

### E-Mail Collaboration

- E-Mail-Service (MS Exchange 2016)
- Spam and Virus Filtering
- Mailing Lists
- MS Sharepoint
- Managed Services
- Project Management Service
- GWDG Pad
- ShareLaTeX
- Rocket.Chat
- GWDG Web-Office
- GitLab

### Server Services

- Virtual Server
- Housing of Servers
- Web Hosting
- GWDG Cloud Server
- FTP-Server

### Network Services

- IP Address Management System
- System Monitoring
- Setting up eduroam
- Integration into the Active Directory
- User Management with OpenLDAP
- Client Management for Windows
- Client Management for macOS and iOS

### Application Services

- Persistent Identifier (PID)
- Library Service Aleph
- Library Service Koha
- Databases
- Application and Registration Services
- Plagiarism Prevention
- Online Surveys
- Bioinformatics Programs
- Statistics Programs
- Jupyter
- Pseudonymisation and Data Trusteeship

### IT Security Services

- Vulnerability Scans on Network-attached Equipment
- Public-Key-Infrastructure (PKI)
- Virus Protection (Sophos Update Service)

### General Services

- Videoconferencing
- Identity and Access Management [MPG]
- Identity and Access Management [Uni]
- Single Sign-on (SSO) /Authentication and Authorization Infrastructure (AAI)
- Software and Licence Management
- Computer Lending Pool
- General Services - Print & Scan Services

### IT Consulting

- Scientific Data Management
- IT Security
- Hardware Purchase
- Apple Support Centre
- Establishing Directory Services (AD, LDAP)
- Planning of Data Transmission Networks







# Example Infrastructure GWDG Cloud Server








„Virtual“ Computer for researchers, working groups and projects

- Computer per self-service
- Suited for arbitrary applications
- Allocatable in different sizes
- Complete control over virtual computer
- Own IP address
- Operated in Göttingen













Our Private Cloud for your dynamic, safe and scalable computing power

Server	Processor	Memory	IP Address
 1 / 3	 2 / 12	 8.0 / 24.0 GB	 1 / 3
Create your own virtual machines and use up to 3 servers for your applications	Choose the computing strength of your machine and assign up to 12	Assign up to 24.0 GB of memory to your virtual machine to match your	Grant world wide access to your virtual machine by assigning a public ip

**Compute optimized**

c1.small	c1.medium	c1.large	c1.xlarge	c1.xxlarge
 2 Cores 2 GB RAM 20 GB Disk	 4 Cores 4 GB RAM 40 GB Disk	 8 Cores 8 GB RAM 80 GB Disk	 16 Cores 16 GB RAM 160 GB Disk	 16 Cores 16 GB RAM 160 GB Disk

**Images**

 CentOS CentOS 6.6 Server x86_64	 CentOS CentOS 7.1 Server x86_64	 Debian Debian 7.8 Server x86_64
 Fedora Fedora 20 Desktop Chrome x86_64	 Fedora Fedora 20 Desktop KDE x86_64	 Fedora Fedora 20 Server x86_64
 openSUSE openSUSE 13.1 Desktop Chrome x86_64	 openSUSE openSUSE 13.1 Desktop KDE x86_64	 openSUSE openSUSE 13.1 Server x86_64
 Scientific Linux Scientific Linux 6.6 Server x86_64	 Scientific Linux Scientific Linux 7.1 Server x86_64	 Ubuntu Ubuntu 12.04.5 LTS Server x86_64

## Example collaborative work A selection



### Kollaboration

- Hosted, private wiki (*eMail to [support@gwdg.de](mailto:support@gwdg.de)*)
- Own Mailinglists: <https://www.gwdg.de/e-mail-collaboration/mailling-lists>
- Cooperative work on texts: [pad.gwdg.de](http://pad.gwdg.de)
- Sharing documents: [owncloud.gwdg.de](http://owncloud.gwdg.de) / cryptshare
- Online work on Office documents: [owncloud.gwdg.de](http://owncloud.gwdg.de)
- Live cooperative work on LaTeX-Documents: [sharelatex.gwdg.de](http://sharelatex.gwdg.de)
- Internetchats (like ICQ): [jabber.gwdg.de](http://jabber.gwdg.de)
- Web- / Team-Chats (like Slack): [chat.gwdg.de](http://chat.gwdg.de)
- Software development / Project management: [gitlab.gwdg.de](http://gitlab.gwdg.de)

### Administration of projects and software development

- Web-based project management with large choice of functionalities for supporting the project life cycle
- Features
  - Wiki
  - Management of tasks
  - Time management
  - Document repository
  - User management
- Integrated Git- and SVN-Repository for software development
- Integration into own development environment possible
- Project areas, in which you can create or manage projects by yourself
- [projects.gwdg.de](http://projects.gwdg.de)

### Diverse solutions and platforms

## VIDEOCONFERENCING

The general [GWGD](#) offer for videoconferencing is the DFNconf service. It is operated by the DFN-Verein, of which the [GWGD](#), [MPG](#), and the University of Göttingen are members.

Currently, however, there are performance bottlenecks due to the strongly increased usage, so that the DFNconf service is not available in the usual stable manner. More information, also regarding the utilization of the service due to the current COVID-19 situation, can be found on web pages of the the DFN-Verein: <https://www.conf.dfn.de>.

The [GWGD](#) has therefore decided to include alternative offers in its portfolio in order to bridge this phase for customers and provide suitable solutions. These are commercial, payed cloud offers where the information leaves our own jurisdiction. We can therefore not guarantee data protection and these services are not permitted for sensitive and/or personal data. We ask you to take this into account when using them.

### Community solutions operated by the GWGD

- [BigBlueButton](#) (operated by the [GWGD](#)): After a successful test operation at the [GWGD](#), a new production operation has been setup under <https://meet.gwdg.de/>; Suitable for groups of up to 100 participants. Currently, telephone dial-in under first test. Higher stability than Jitsi.
- [DFNconf](#) (operated by DFN-Verein): Currently only limited use.
- [Jitsi](#) (operated by [GWGD](#)): Open source solution, suitable for videoconferencing with smaller numbers of participants. With more than 10 participants the quality fluctuates. A [GWGD](#) hosted version of Jitsi might come back in the future. We currently offer [BigBlueButton](#) instead.

### Commercial, external platforms

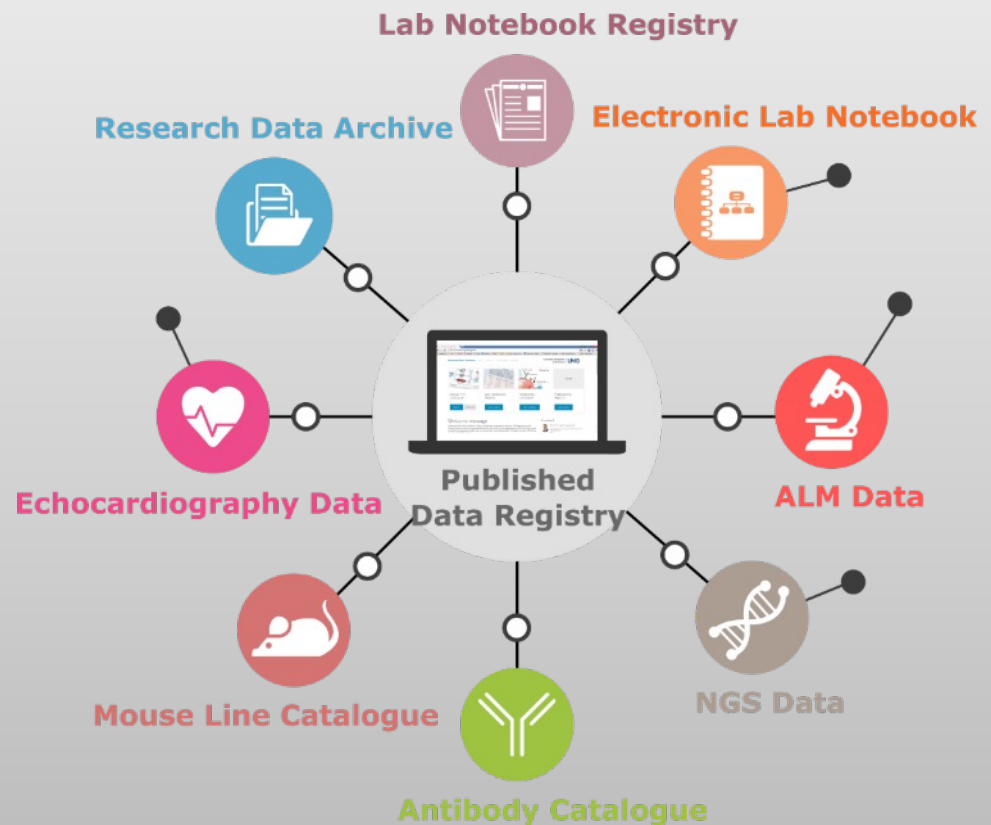
- [Zoom](#)
  - Cloud-based, critical in terms of data protection, scales well for larger subscriber numbers.

#### – Table of Contents

- Videoconferencing
  - Community solutions operated by the GWGD
  - Commercial, external platforms
  - Evaluation and recommendations especially for the University of Göttingen
  - Assessment for courses
    - Alternatives
      - Microsoft Teams
  - Limitations and challenges
  - Media server of the GWGD

## Support of researchers from different disciplines

- **Goals**
  - Traceability
  - Transmission of data to community repositories
- **Collection & Documentation of**
  - Publications
  - ALM data
  - NGS data
  - Supersonic data
- **Connection of**
  - Publications
  - Antibodies
  - Lab notebooks
  - Mouse-Genome-Lines



## Your personal contact with us



+49 551 201 1523

Contact our hotline



[support@gwdg.de](mailto:support@gwdg.de)

Send us an email and we will contact you soon



[support.gwdg.de](https://support.gwdg.de)

Check your tickets  
(Account required)



[www.gwdg.de/docs](https://www.gwdg.de/docs)

[www.gwdg.de/faq](https://www.gwdg.de/faq)

Docs & FAQ



### New here?

A brief overview of frequently asked questions

[Request account](#)

[Change password](#)

[Check email](#)

[Wi-Fi \(eduroam\)](#)

[Download Antivirus Software](#)

[Print](#)

[Buy Software](#)

[Courses](#)

# 3. Ethikkommission at the UMG

Judith Friedrich



Information event „Research Data Management and Central Service  
Facilities at the UMG“

- ▶ Office of the “Ethik-Kommission”  
(ethics committee)
- ▶ Where? Von Siebold-Str. 3
- ▶ When? Monday-Friday  
9:30-12:00





Info-Veranstaltung  
"Datenmanagement und Service-  
Einheiten an der UMG"

# „Ethik-Kommission“

- ▶ Purpose of the Ethik-Kommission (What does the Ethik-Kommission do?)
  - The Ethik-Kommission is an independent body whose purpose is to evaluate the ethical and legal aspects of biomedical research involving human subjects. As laid down in the Declaration of Helsinki, also research projects **involving patient data** have to be approved by a research ethic committee.
- ▶ Responsibility of the Ethik-Kommission of the UMG
  - The Ethik-Kommission of UMG is responsible for members and dependants of the Medical Faculty of Göttingen and its teaching hospitals.

# Ethik-Kommission

- ▶ Method of operation (How does the Ethik-Kommission work?)
  - The Ethik-Kommission only reacts to applications by giving an evaluative statement.
  - Holds a non-public meeting once a month
  - Gives a written notice to the applicant of its decision

# The Ethik-Kommission consists of:

- ▶ 11 members and 23 deputies
- ▶ medical doctors, paramedical staff, experts in statistics and ethics, lawyers, laypersons
- ▶ all members act on a voluntary basis

# Persons of contact

- ▶ Chairman: Prof. Dr. Brockmüller
- ▶ Manager: Mrs. Wettschereck

- ▶ Contact persons

for “other” studies and studies involving medical devices

Mrs. Dr. Friedrich  
Mr. Langer

- ▶ Secretary: Mrs. Gödicke

# Studies (1)

- ▶ **AMG–Studies (studies involving pharmaceuticals)**  
Studies regulated by “Arzneimittelgesetz” and Clinical Trial Regulation
  
- ▶ **MDR/MPG–Studies (studies involving medical devices)**  
Studies regulated by “Medical Device Regulation” or “Medizinproduktegesetz”

# Studies (2)

## ▶ “other Studies”

- Research projects with “Beratungspflicht” by MBO (Operating researchers are obliged to consult the Ethik-Kommission’s advice by *Muster Berufsordnung für deutsche Ärztinnen und Ärzte*)
- Possibility of accepting the vote of another Ethik-Kommission (Übernahmevotum)
- Retrospective data analysis studies: possibility of a shortened approval process

# Comprehensive consultation:

- ▶ Make an appointment
- ▶ For further information, please refer to our website:

<https://www.umg.eu/ueber-uns/vorstand/kommissionen/ethikkommission/>



# **4. Datenschutzbeauftragter der UMG**

Florian Gottschalk

# Research and Data Protection

- „sensitive data“ / personal data
- Datenschutz-Grundverordnung (DSGVO)
- Datenschutz-, Einwilligungserklärung („broad consent“)
- Technologie- und Methodenplattform für die vernetzte medizinische Forschung e.V. (TMF) [https://www.tmf-ev.de/Arbeitsgruppen\\_Foren/AGDS.aspx](https://www.tmf-ev.de/Arbeitsgruppen_Foren/AGDS.aspx)

# Research and Data Protection

## Further information



**Florian Gottschalk**

Tel.: 39-62762

E-Mail: [datenschutz@med.uni-goettingen.de](mailto:datenschutz@med.uni-goettingen.de)

<https://www.umg.eu/ueber-uns/vorstand/stabsstellen-beauftragte/beauftragte/datenschutzbeauftragter/>

# 5. Core facilities at UMG

Dr. Marie Hedderich

## 3. Core Facilities at the UMG



Research, Data, Management: Data management basics and services for your daily research routine at the UMG

## Central Core Facilities

- ▶ **Central Animal Facility** (*Dr. Riedesel, sekretariat.zte@med.uni-goettingen.de, 39-63900*)
- ▶ **Central Biobank UMG** (*PD Dr. Nußbeck, biobank@med.uni-goettingen.de, 39-65700*)
- ▶ **Central Research Workshop Facilities** (*Mr. Lott, clott@gwdg.de, 39-5924*)
- ▶ **Clinical Trials Unit UMG** (*Mr. Tostmann, studienzentrum-umg@med.uni-goettingen.de, 39-60812*)

## Scientific Core Facilities

- ▶ **NGS-Core Unit for Integrative Genomics (NIG)** (*Dr. Salinas, gsalina@gwdg.de, 39-60778*)
- ▶ **Proteomics** (*Dr. Lenz, proteomics.ms@med.uni-goettingen.de, 39-65192*)
- ▶ **MR-Research in Neurosciences** (*PD Dr. Dechent, mrserviceeinheit.sekretariat@med.uni-goettingen.de, 39-13140*)
- ▶ **Medical Biometry and Statistical Bioinformatics**  
(*Dr. Leha, service.biometry.bioinformatics@med.uni-goettingen.de, 39-64829*)
- ▶ **Cell Sorting** (*Prof. Wulf, cellsorting@med.uni-goettingen.de, 39-8427*)
- ▶ **MR-Research in Cardiovascular Imaging** (*N.N., 39-68965*)
- ▶ **Medical Data Integration Center (MeDIC)** (*Prof. Dr. Tibor Kesztyüs, tibor.kesztyues@med.uni-goettingen.de, 39-61531*)



# Where to find information?

<https://www.umg.eu/en/research/science-support/scientific-infrastructure/core-facilities/>




## Core Facilities

University Medical Center Göttingen



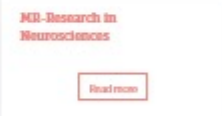




Core facilities have been set up in selected areas to methodological support and promote research at the University Medical Center Göttingen (UMG). This process enables the efficient and sustainable provision of specific scientific services and infrastructures and leads to an improved utilization of highly specialized equipment. In addition, the transfer of subject matter expertise is promoted and supported.

The UMG has three central core facilities. In addition, six scientific core facilities are established and listed to scientific departments of the UMG in order to ensure long-term high standard methods expertise.

### Central core facilities

 <b>Central Biobank</b> <a href="#">Read more</a>	 <b>Central Scientific Workshop</b> <a href="#">Read more</a>	 <b>Central Animal Facility</b> <a href="#">Read more</a>
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### Scientific core facilities

 <b>NCS Facility for Integrative Genomics</b> <a href="#">Read more</a>	 <b>Proteomics</b> <a href="#">Read more</a>	 <b>MR-Research in Neurosciences</b> <a href="#">Read more</a>
 <b>Medical Biometry and Statistical Bioinformatics</b> <a href="#">Read more</a>	 <b>Cell Sorting</b> <a href="#">Read more</a>	
 <b>Medical data integration center (UMG-MeDIC)</b> <a href="#">Read more</a>	 <b>MR-Research in Cardiovascular Imaging</b> <a href="#">Read more</a>	

- Contact details
- User regulations
- User fees
- Catalogue of services
- Application form

***Please contact the facilities in advance to plan and calculate the costs of the experiment!***

# Application for flat-rate user fees and costs for keeping laboratory animals

DFG-Vordruck 55.03 – 12/20

Seite 1 von 1

## Hinweis

Richtwerte für die Beantragung von Tierkosten

guide values for basic animal husbandry:

- 0,75 € per mouse/week
- 1,50 € per rat/week

separate application for animal purchase

DFG-Vordruck 55.04 – 12/20

Seite 1 von 13

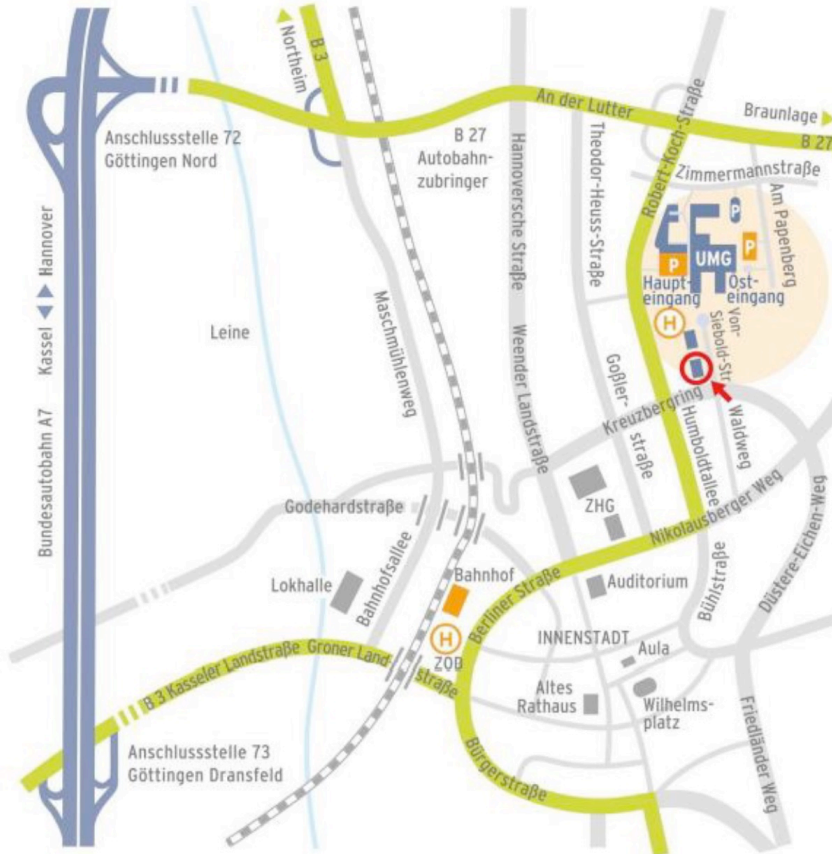
## Hinweise

zu Gerätenutzungskosten und zu Gerätezentren

- Magnetic resonance imaging
- Mass spectrometry
- Advanced light microscopy
- Electron microscopy
- NMR spectroscopy
- Flow cytometry

It can only be applied for project-specific costs!

# Contact Details – Research Management



**Research Management**  
 Von-Siebold-Str. 3, 37075 Göttingen  
[forschung@med.uni-goettingen.de](mailto:forschung@med.uni-goettingen.de)

## 6. Advisory services at the Department of Medical Informatics

Dr. Harald Kusch

<https://medizininformatik.umg.eu/>



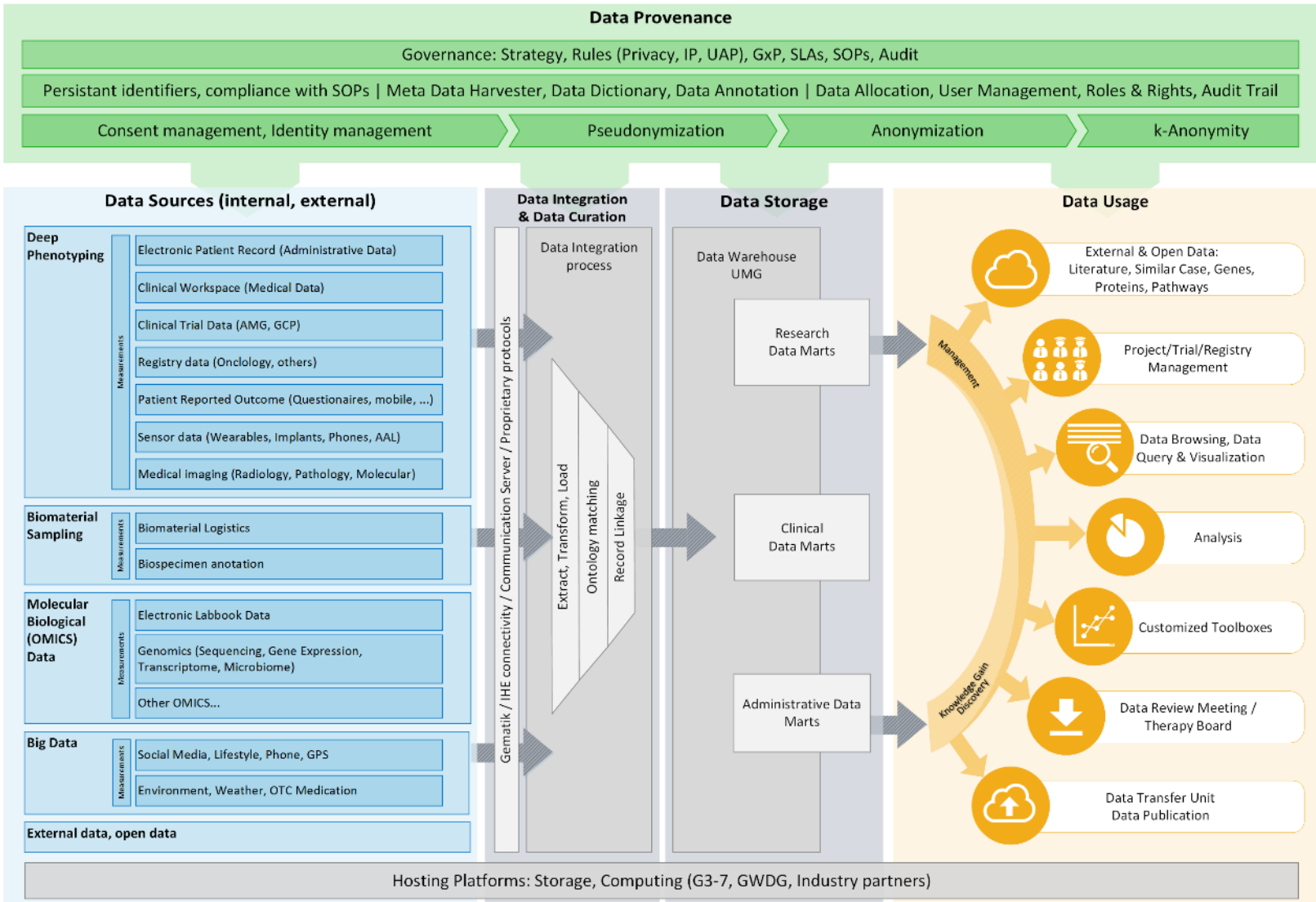
## Advisory services at Department of Medical informatics

- Support for design of scientific studies in coordination with Med. Statistics, “Studienzentrum” or other service facilities at Göttingen Campus
- Provision of information infrastructures in cooperation with computing centers, external research institutions, biobanks etc.
- Open for all institutions, working groups and PhD students
- Open also for national or international research partners or consortia

# Hard- und software infrastructure

UNIVERSITÄTSMEDIZIN GÖTTINGEN UMG

Department of Medical Informatics  
University Medical Center Göttingen





## Example services

- Coordination of large biomedical expert networks, e.g.:
  - Nationale Forschungsdateninfrastruktur (NFDI4Health)
  - Medical Informatics Initiative (HiGHmed)
- Handling of sensitive patient data: e.g. Deutsches Zentrum für Herz- und Kreislaufforschung (DZHK)
- OMICS data management: Clinical Research Unit 5002
- FAIR biomedical data management, e.g.:
  - Cluster of Excellence Multiscale Bioimaging (MBExC)
  - INF-project of a Collaborative Research Center: Cardiology CRC 1002

## Contact persons at Department of Medical Informatics

Prof. Dr. Dagmar Krefting	Head of Department
Prof. Dr. Ulrich Sax	IT-infrastructures for translational research
Sabine Hanß	IT-infrastructures for clinical collaborative research
Prof. Dr. Tibor Kesztyüs	Medizinisches Forschungs-Daten-Integrations-Centrum (UMG-MeDIC)
Prof. Dr. Anne-Christin Hauschild	Clinical Decision Support
Nicolai Spicher	Biosignal Processing
Kerstin Pischek-Koch	Intersectoral research
Dr. Harald Kusch	IT infrastructures in biomedical basic research

Contact to Göttingen eResearch Alliance

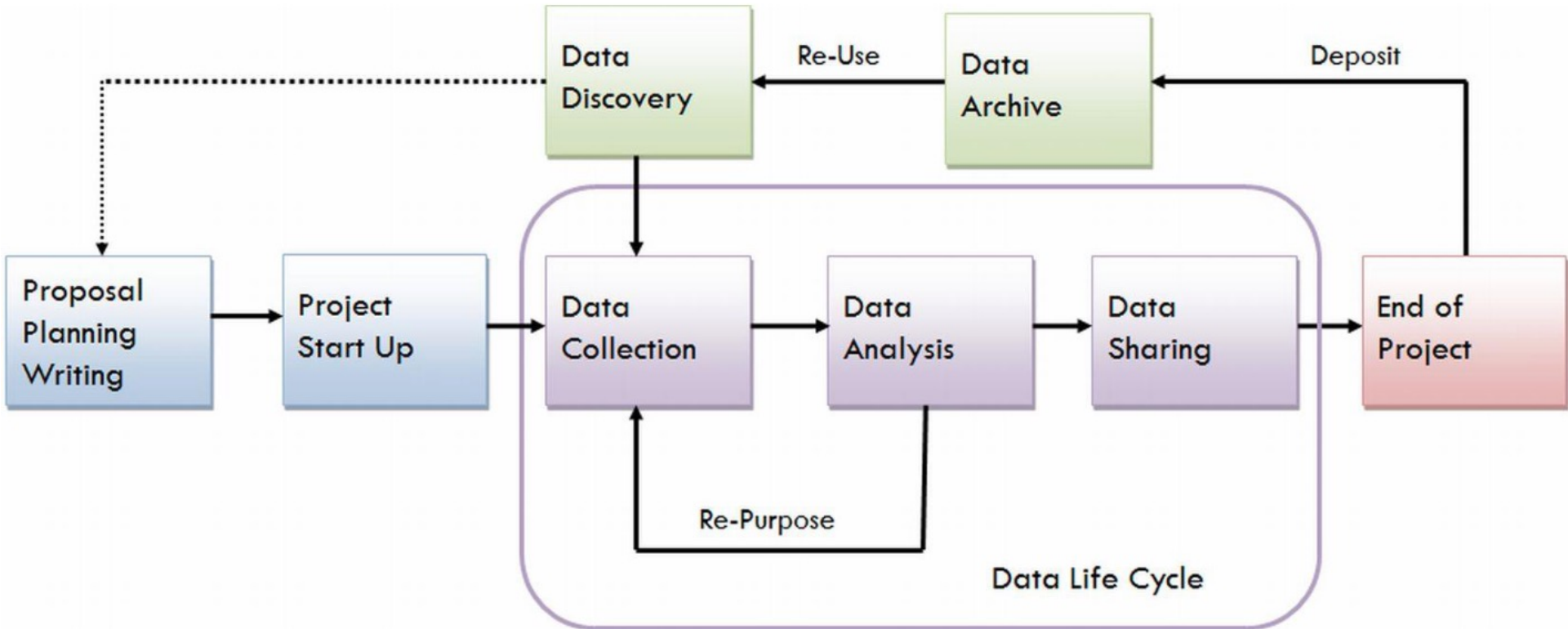
<https://medizininformatik.umg.eu/>



## **7. Services at the Medical Statistics / Medical Bioinformatics**

- *Core Facility Medical biometry and Statistical Bioinformatics*
- *Systematic Reviews und Meta-Analyses*
- *Clinical Epidemiology and Health Economics*
- *Biometry, Data Management and Informatics in Clinical Trials*

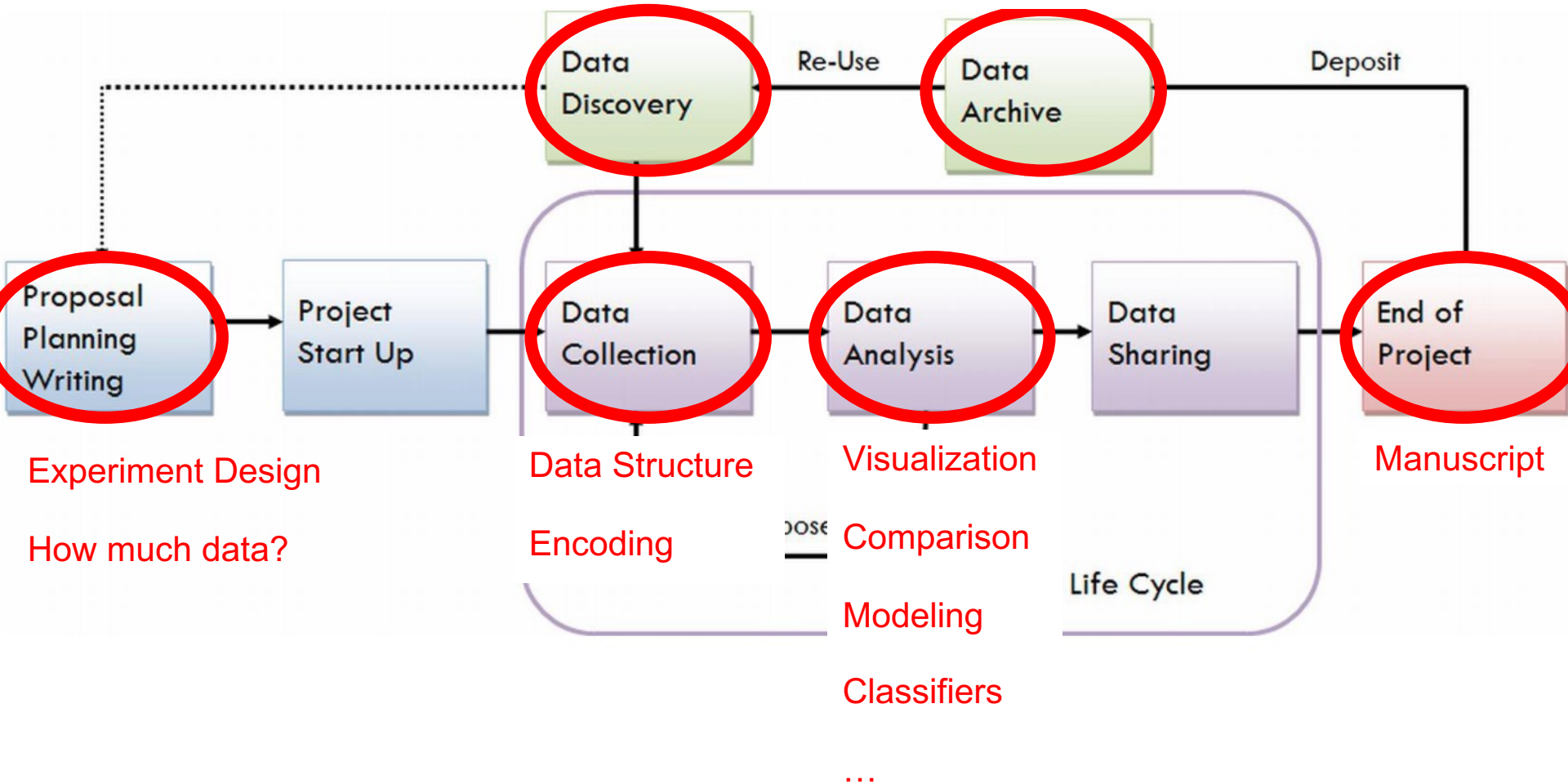
Dr. Andreas Leha, Prof. Dr. Tim Mathes, Dr. Thomas Asendorf



MetaAnalyses

Public  
Repositories  
(e.g. TCGA)

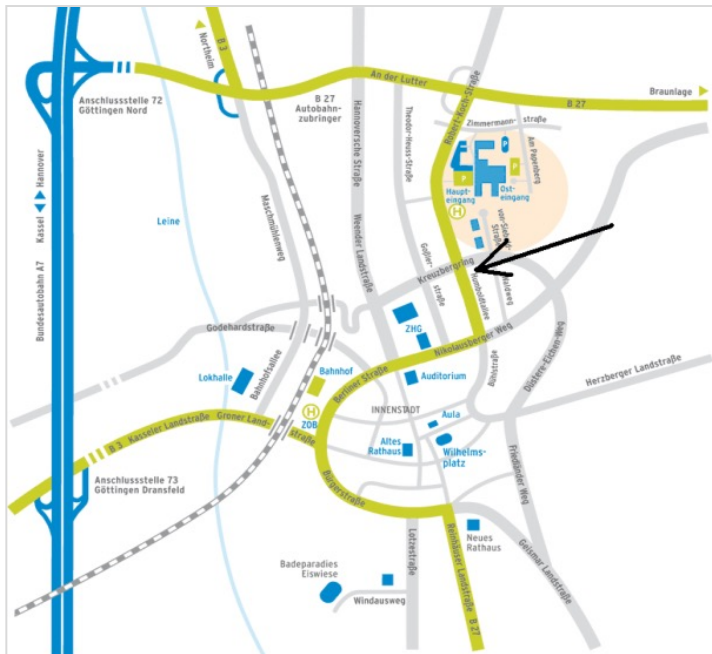
GRO.data  
Zenodo+github  
GEO / SRA  
PRIDE



## Core Facility

# Medical Biometry and Statistical Bioinformatics

## Contact



University Medical Center Göttingen  
Department of Medical Statistics

37099 Göttingen **Mailing Address**  
Humboldtallee 32, 37073 Göttingen **Address**  
0551 / 39-4987 **Phone**  
0551 / 39-4995 **Fax**

[service.biometry.bioinformatics@med.uni-goettingen.de](mailto:service.biometry.bioinformatics@med.uni-goettingen.de) **E-Mail**  
[medstat.umg.eu/forschung/wissenschaftliche-serviceeinheit/](http://medstat.umg.eu/forschung/wissenschaftliche-serviceeinheit/) **Website**

## Core Facility

### *Medical Biometry and Statistical Bioinformatics*

#### Short consulting

- ▶ Help with short questions concerning biostatistical or bioinformatical methods



- ▶ **Tuesday, 1pm – 3pm**

at the Department of Medical Statistics, Humboldtallee 32  
currently **online via video conference**

- ▶ Can be visited without prior appointment

- ▶ [medstat.umg.eu/forschung/wissenschaftliche-serviceeinheit/statistische-beratung/](https://medstat.umg.eu/forschung/wissenschaftliche-serviceeinheit/statistische-beratung/)





## Core Facility

### *Medical Biometry and Statistical Bioinformatics*

#### Coached working

- ▶ Assistance with statistics- and bioinformatics-software



current team of student assistants

- ▶ Location:
  - ▶ CIP-pool of the Department of Medical Statistics
  - ▶ Learning Ressource Center (Medical Library)
  - ▶ Or online via video conference
- ▶ No prior appointment necessary
- ▶ Time schedule available at website



# Core Facility

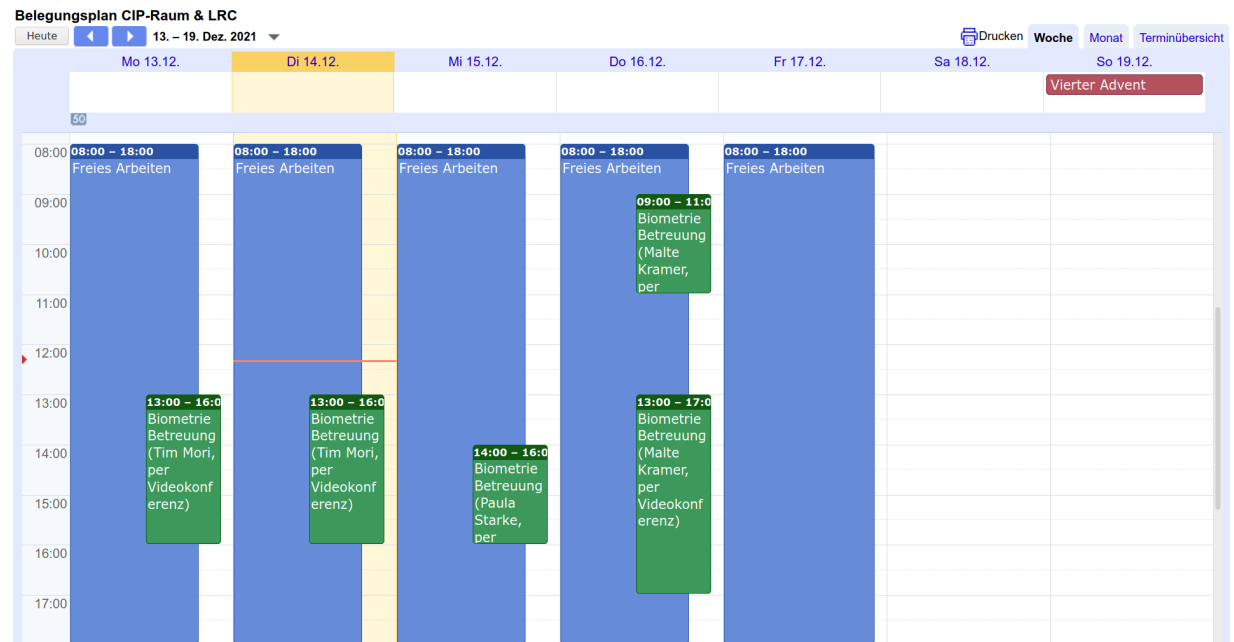
## Medical Biometry and Statistical Bioinformatics

[medstat.umg.eu/forschung/wissenschaftliche-serviceeinheit/betreutes-arbeiten/](https://medstat.umg.eu/forschung/wissenschaftliche-serviceeinheit/betreutes-arbeiten/)

### ► Coached working

Aufgrund der aktuellen Covid-19-Situation findet das Betreute Arbeiten ausschließlich digital per Videokonferenz mit den Mitarbeitern statt. Zur Terminvereinbarung außerhalb der unten genannten Zeiten und um die Zugangsdaten zu erhalten, senden Sie bitte eine Email an den jeweiligen Betreuer.

Aufgrund technischer Einschränkungen finden Sie die Belegungspläne aktuell nur extern als [Google-Kalender](#) (alle Angaben ohne Gewähr, Änderungen vorbehalten).

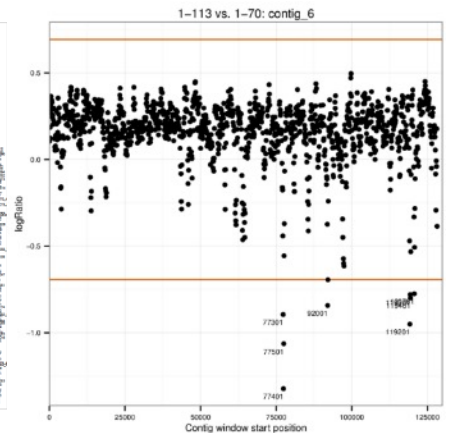
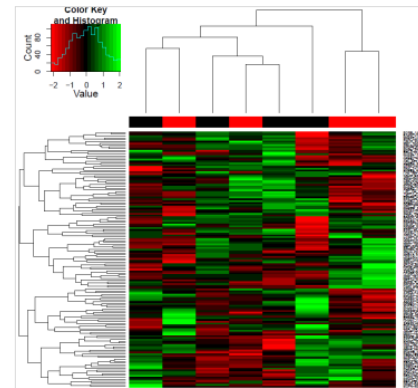


# Core Facility

## *Medical Biometry and Statistical Bioinformatics*

### Project-related support

- ▶ We can carry out the biometrical and bioinformatical **planning** and **analysis** of your scientific experiments and studies:
  - ▶ Design of experiments, sample size planning
  - ▶ Statistical analysis
  - ▶ Bioinformatics analysis (e.g. array-, proteomics- and NGS-data)
  - ▶ Reporting of results

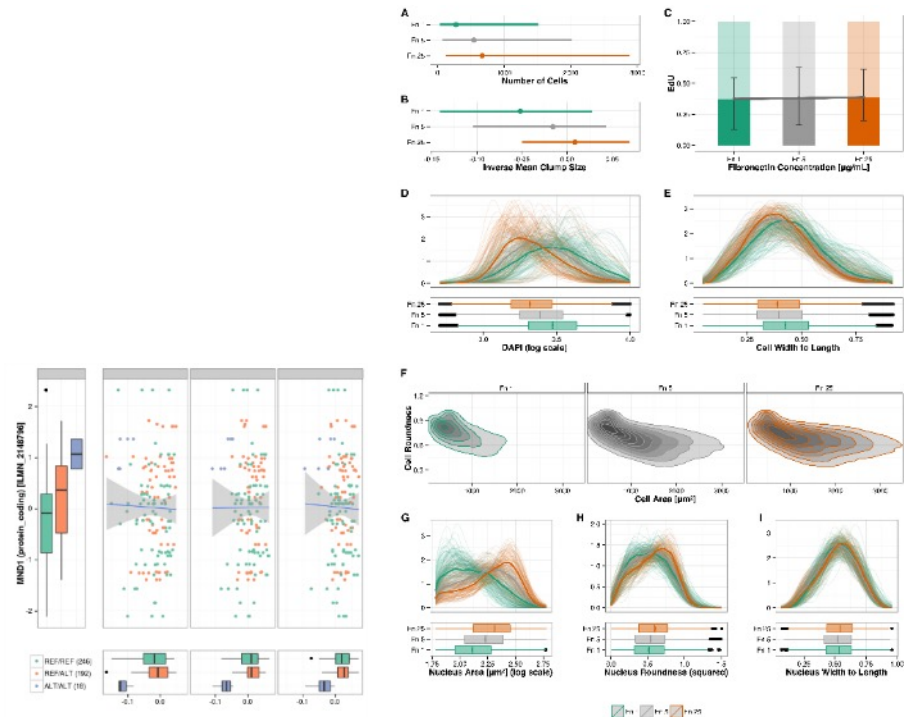


# Core Facility

## Medical Biometry and Statistical Bioinformatics

### Project-related support

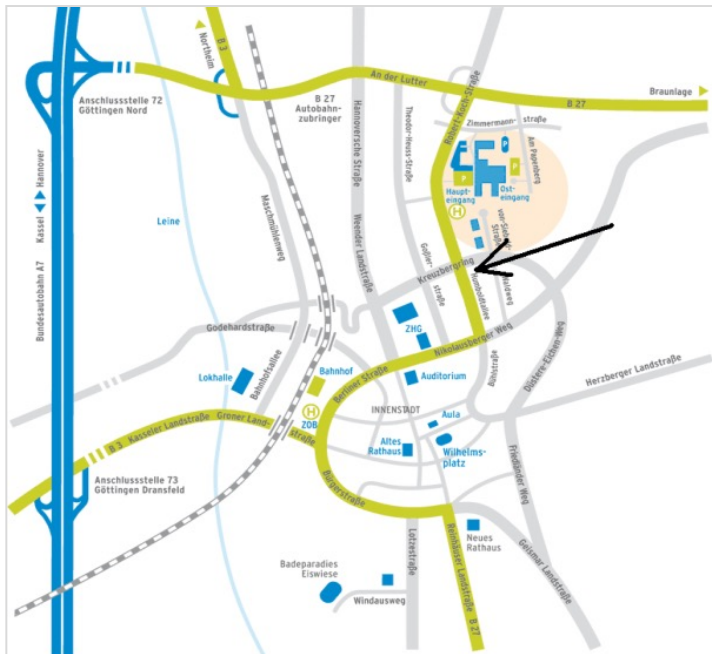
- ▶ We recommend early involvement (i.e. already in the planning phase)
- ▶ Appointment via our web form preferred (department homepage)
- ▶ There will be an invoice
  1. Discussion of project
  2. Cost estimate based on time effort
  3. Service request



## Core Facility

# Medical Biometry and Statistical Bioinformatics

## Contact



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Department of Medical Statistics

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[medstat.umg.eu/forschung/wissenschaftliche-serviceeinheit/](http://medstat.umg.eu/forschung/wissenschaftliche-serviceeinheit/) **Website**

## Service Group

### *Systematic Reviews and Meta-Analyses*

Planung (einschließlich Antragsberatung) und Analysen in den folgenden Bereichen:

- Systematische Reviews und Meta-analysen
- Evidenzberichte für Leitlinien
- Andere Formen der Evidenzsynthese (z.B. Rapid-Reviews)

Junior-Prof. Dr. Tim Mathes



## Working Group

### *Clinical Epidemiology and Health Economics*

Planung (einschließlich Antragsberatung) und Analysen in den folgenden Bereichen:

- Analyse von Real-World-Data (z.B. Registerauswertungen)
- Statistische Analyse von Versorgungsforschungsstudien und pragmatischen randomisierten Studien (z.B. Screening Trials)
- Gesundheitsökonomische Auswertung im Rahmen von klinischen Studien und Versorgungsforschungsstudien

Junior-Prof. Dr. Tim Mathes





# AG

## ***Biometry, Data Management and Informatics in Clinical Trials***

**Joint Group of the *Medical Statistics, Medical Informatics and Clinical Trials Unit UMG***

**Head: Dr. Thomas Asendorf and Sabine Hanß**

### Application phase

- ▶ Choice of primary/secondary endpoints
- ▶ Suitable study design
- ▶ Sample size planning and calculation
- ▶ Early aspects of data management

### Data management

- ▶ Web based data bases in REDCap® and secuTrial®
- ▶ Conception of questionnaires
- ▶ Handling of eCRFs and SAEs

### Statistical (interim) analysis

- ▶ Statistical analysis plan (SAP)
- ▶ Sample size re-calculation
- ▶ Descriptive statistics
- ▶ Analyses of primary and secondary endpoints
- ▶ Advanced graphical representation



### Publication

- ▶ Specific statistical analyses
- ▶ Material and methods section
- ▶ Publication quality figures
- ▶ Publication of study protocols

# Working with REDCap at the UMG

**REDCap is running on GWDG Servers and administrated by the Working Group Biometry, Datamanagement and Informatics in Clinical Trials**

Read & agree to conditions and register for an Account:

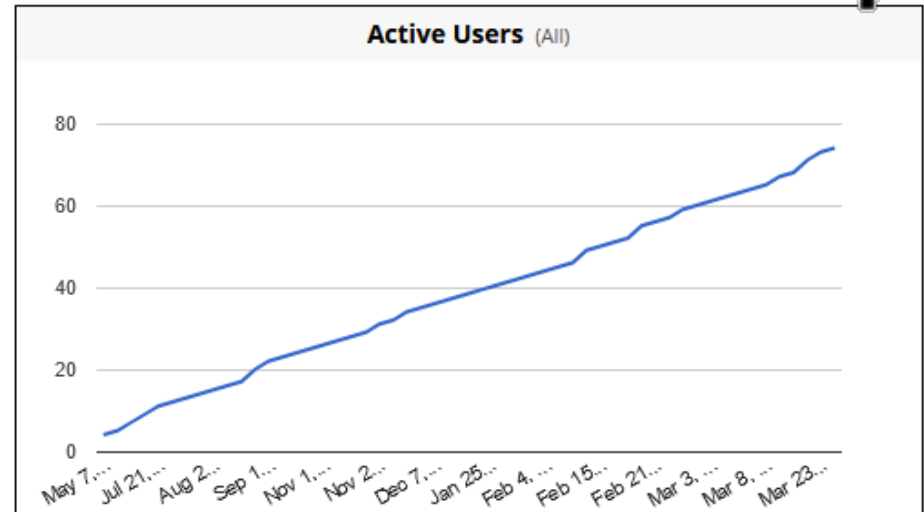
<https://redcap.umg.eu/surveys/?s=KHCHYHL7A83>

## Why use REDcap?

- ▶ Collect data in a structured way
- ▶ Thorough documentation with collaborators
- ▶ Data is secured and cannot be lost
- ▶ All edits to the data are documented
- ▶ Quick transition to data analysis

## What can I use it for?

- ▶ Online documentation together with others
- ▶ Online questionnaires (PROs)
- ▶ Documentation via tablet or smartphone
- ▶ Longitudinal data
- ▶ Repeatable instruments (e.g. adverse events)



# 8. Services of the Central Biobank UMG

PD Dr. Sara Nußbeck

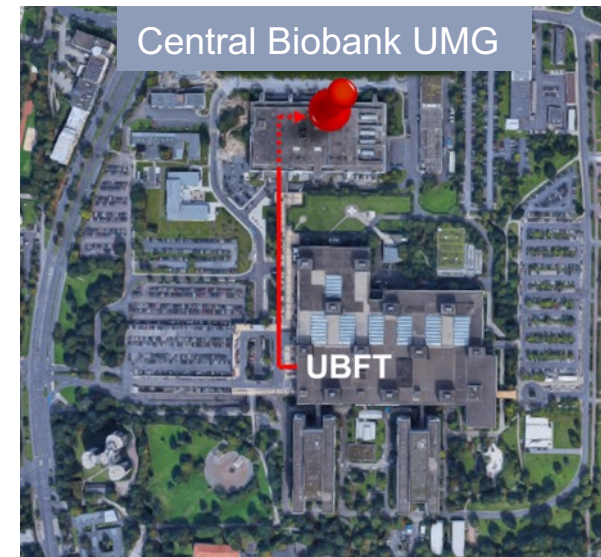
## 8. Services of the Central Core Facility Central Biobank UMG



PD Dr. Sara Nußbeck, Head of Central Biobank UMG

# Central Biobank UMG – Central Core Facility

- Facility to support the research of all institutes and clinics of the UMG
- Advise for biospecimen and biospecimen data collection
- Standardised processes for biospecimen processing
- Storage of biospecimen
  - at  $-80^{\circ}\text{C}$
  - in the vapour phase of  $\text{LN}_2$
  - at room temperature (FFPE and slides)
- Retrieval of selected biospecimen
- Cooled transport and shipping
- Additional services available
- Founding member of the biobank excellence network



# Infrastructure

- Sufficient structured storage capacity
- Backup-systems and equipment
  - High reliability of storage by redundancies in cooling and use of LN<sub>2</sub> vessels and back-up
  - Two independent temperature monitoring systems (24/7)
- Clearly identifiable storage containers and refrigeration equipment inventory (barcodes /2D-Code)
- Professional biospecimen management software



STARLIMS®

## Advantages for user:

Comprehensive biospecimen logistics and use of technical expertise of the Central Biobank staff results in more time for your research.



# Equipment of the Central Biobank UMG





# Equipment of the Central Biobank UMG



Auslagerung aus dem Lagerroboter

# Equipment of the Central Biobank UMG



Innenleben des Lagerroboters

# Equipment of the Central Biobank UMG



Auslagerung aus dem Stickstofftank



# Equipment of the Central Biobank UMG



Transportwagen CryoCart

# Equipment of the Central Biobank UMG



# Equipment of the Central Biobank UMG

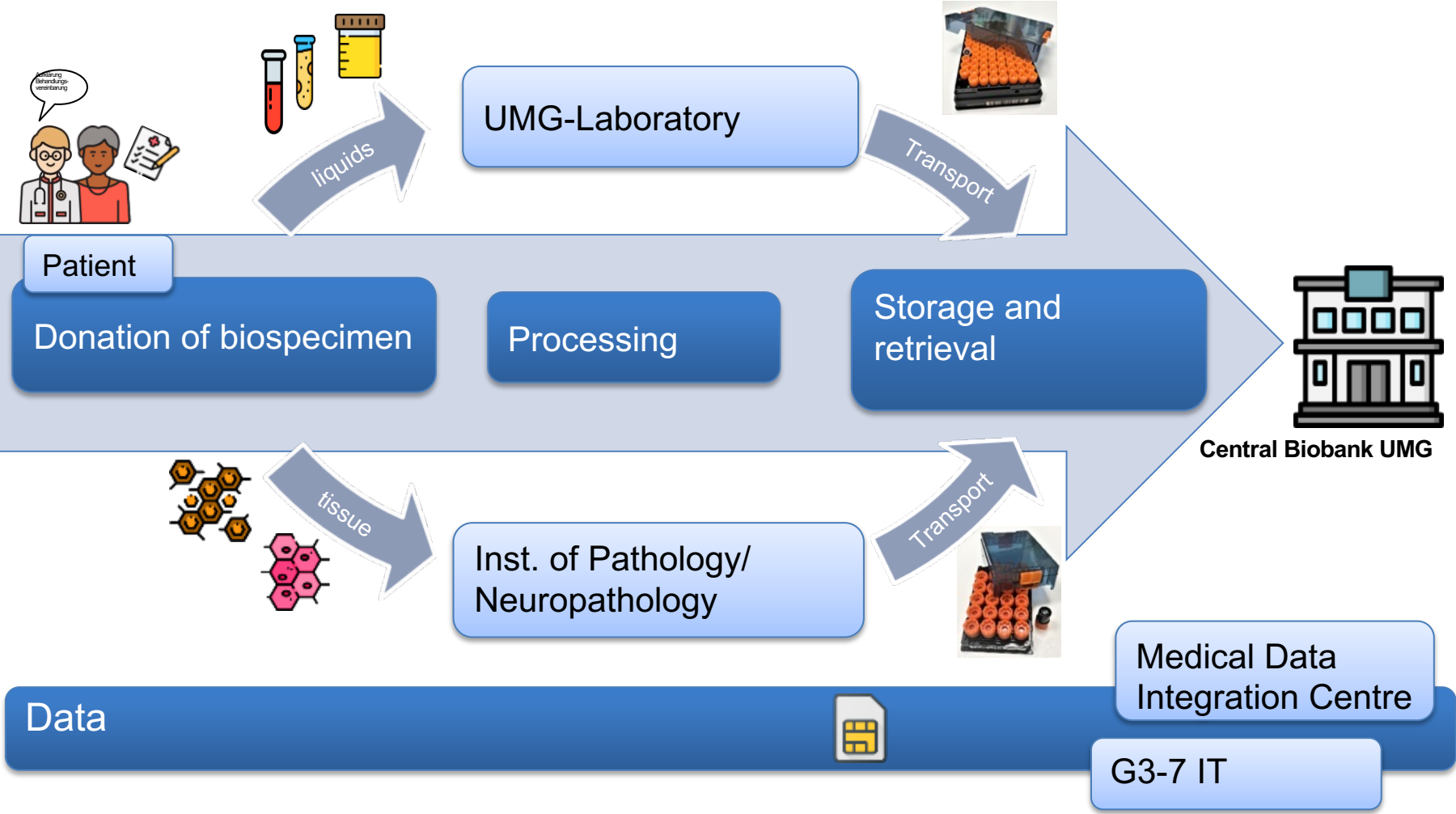


# Additional features of the Central Biobank UMG

- Quality assured and quality controlled, traceable documentation of samples and metadata (accreditation according to ISO 20387:2020 in finalization)
- Keeping data security and privacy
- Emergency strategy in case of failure of the cooling units
- Interface management
- Terms of use including catalogue of costs and services
- Trial specific services for UMG researchers
- Support in finding suitable samples also outside UMG
- Minimizing pre-analytical influences through standardization of processes



# Processes of UMG Collection



# Team of the Central Biobank UMG is looking forward to support your research



<https://biobank.umg.eu>

For suggestions and questions please contact us: -65708 or [biobank@med.uni-goettingen.de](mailto:biobank@med.uni-goettingen.de)

**Thanks for your attention!**  
**Are there further questions?**

<http://ereseach.uni-goettingen.de>  
[info@ereseach.uni-goettingen.de](mailto:info@ereseach.uni-goettingen.de)