

# 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. Core Facility Medical Biometry and Statistical Bioinformatics
8. Services of the Central Biobank UMG

# Example: CRC 1002

## Electronic laboratory notekeeping

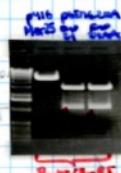


### Paper lab notebook

OCTOBER 15 1998

DIGEST:

2 $\mu$ l pG16 MET25 2.5 $\mu$ l 6EM6.2MA Eno21/AA  
 4.5 $\mu$ l UNIVERSAL B 4.5 $\mu$ l UNIVERSAL B  
 2.25 $\mu$ l H<sub>2</sub>O 2.25 $\mu$ l H<sub>2</sub>O  
 0.5 $\mu$ l BENTIC 0.5 $\mu$ l BENTIC  
 0.5 $\mu$ l EcoRI 0.5 $\mu$ l EcoRI  
 → CIP



LIGS:

- 6 $\mu$ l pG16 MET25
- 2 $\mu$ l Eno24/AA / H<sub>2</sub>O

1.9 $\mu$ l H<sub>2</sub>O  
 3 $\mu$ l T4-LIGG  
 0.5 $\mu$ l T4-LIGASE

AND TRANSFORM AFTER 4h OF LIGATION

DIGEST TEMPLATE-DNA FOR MAKING RNA:



### Electronic lab notebook (ELN)

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

<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>

Signal

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

You found 482 hits.

Time	User	Action	Type	Resource	Name
2016-04-21 15:38:12	Dr. Harald Kusch	READ	RECORD	SD381	Experiment 1 based on Template AG Lehnart STED Microscopy Image Acquisition
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
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
2016-04-21 11:42:08	Dr. Harald Kusch	READ	RECORD	SD353	Template - AG Lehnart - Western Blot - Immuno detection for Western Blotting

Dye di-8-ANEPPS

Excitation in nm 490

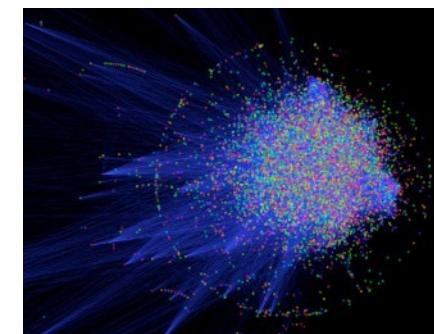
laser pulsed diode laser (Pico TA 490, Toptica)

# 1. Management of Research Data

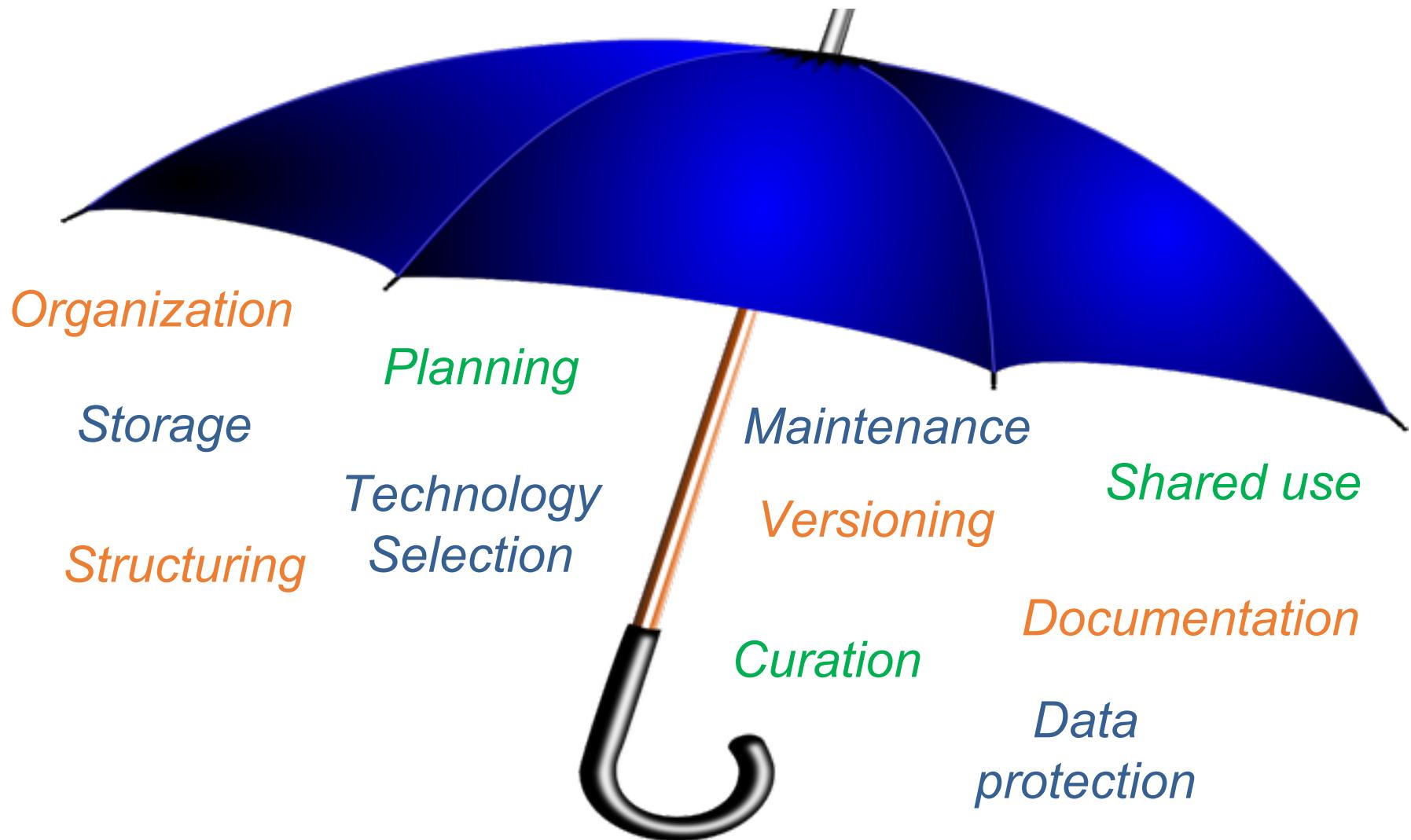


Data are **representations** of observations, objects, or other entities used as **evidence** of phenomena for the purposes of research or scholarship.

*(Christine Borgmann 2014)*



# What is research data management?



# Basic questions I

## Organization and storage

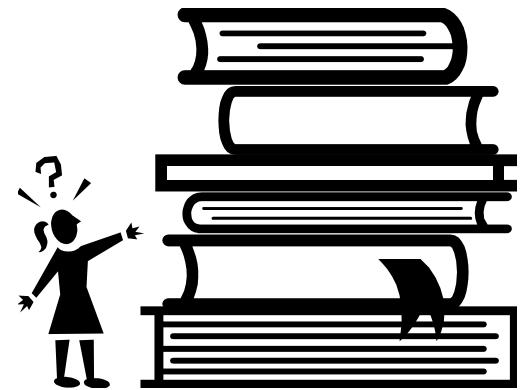
- Can you find, access and use what you need when you need it?
- Are your data stored safely? Have you implemented a backup plan?



# 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

The screenshot shows the homepage of the Göttingen eResearch Alliance. At the top left is the logo 'GA' with the years '1737'. To its right is the text 'Göttingen eResearch Alliance'. Below this is a navigation bar with 'Focus areas' and a search bar. The main content area has a blue header '28. August 2014: Research data policy of the Georg-August University Goettingen (incl. UMG)'. Below this is a section titled 'Preamble:' followed by a detailed list of 10 points outlining the research data policy.

**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.

Source: <http://www.uni-goettingen.de/en/488918.html>

# Research Data Policy of Göttingen University incl. UMG

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

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

Aa+ Aa-



Search | Deutsch

- Topics addressed:
  - Preamble:**
    - Research Data, Research Data Management and its purposes**  
The Georg-August-University Göttingen, Johann Wolfgang von Goethe University Frankfurt am Main and the University of Göttingen, make research data accessible and reusable across disciplines and generations. The management, protection, preservation and sustainable provision of research data must therefore be based on a common set of principles that 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.
    - 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

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.

Source: <http://www.uni-goettingen.de/en/488918.html>

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
  - <https://pad.gwdg.de/s/OpenScienceGOE#>
  - Open Science principles
  - Teaching
  - Data science
- “HackyHour”: Meet, discuss, experiment together with experts on a given topic

<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

**GÖTTINGENRESEARCHONLINE**

Metrics 622 Downloads

Search this dataverse... Find Advanced Search + Add Data Sort

**Dataverses (11)**

**Datasets (22)**

Files (214)

**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)

**Keyword Term**

Applied Art (3)

**1 to 10 of 33 Results**

Image review on mobile devices for suspected stroke patients: Evaluation of the mRay® software solution  
May 14, 2019 - Alex Brehm Dataverse  
Brehm, Alex, 2019, "Image review on mobile devices for suspected stroke patients: Evaluation of the mRay® software solution", <https://doi.org/10.25625/NDWV9G>, Göttingen Research Online, V1

Supplementary data for paper Image review on mobile devices for suspected stroke patients: Evaluation of the mRay® software solution

Alex Brehm Dataverse (Dienst der GWGD)  
May 14, 2019

PDF Copy Of Online Survey  
May 3, 2019 - GRACe  
Roertgen, Steffen; Harald, Kusch; Claudia Engelhardt; Sven Bingert; Valeria Savin; Inga Kraus, 2019, "PDF Copy Of Online Survey", <https://doi.org/10.25625/R48ZD5>, Göttingen Research Online, V1  
This is a PDF copy of an online-survey sent to members of UMG within the GRACe-project. Link to a copy of the online-survey: Online Survey

Survey results  
Mar 20, 2019 - Dehradun Dataverse  
Hoffmann, Ellen, 2019, "Survey results", <https://doi.org/10.25625/OTNSMI>, Göttingen Research Online, V1, UNF:6:dgChlu7tRy+FFugy9x8e9Q== [fileUNF]  
Results of the survey of 100 migrant households in Dehradun, Uttarakhand, Northern India (data digitalized into Excel)

Kandai-images  
Mar 20, 2019 - Dehradun Dataverse  
Hoffmann, Ellen, 2019, "Kandai-Images", <https://doi.org/10.25625/ZW5CW2>, Göttingen Research Online, V1  
Time series of land use maps of Kandai village, Uttarakhand, North India

# 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 shows the Göttingen Research Online Publications interface. At the top, there's a navigation bar with tabs for 'Publications' (selected), 'Researcher', and 'Journals'. On the right, there are links for 'GRO', 'Help', 'Login', and language selection ('DE'). Below the navigation is a search bar with a magnifying glass icon and a 'Reset' button. A 'Publications' section displays a list of items, with the first one being a 'Conference Paper' by Gisbertz-Astolfi (2021) titled 'Die Sackgassen des Humiliationismus in Metaphysik oder Positivismus'. The second item is a 'Book Chapter' by Schwerdtfeger (In Press) titled 'Art. 53 – Der Bundesrat, Teilnahme der Bundesregierung'. The third item is another 'Book Chapter' by Art. 137 titled 'Beschränkung der Wählbarkeit von öffentlich Bediensteten'. To the right of the publications list is a 'Filter' sidebar with dropdown menus for 'Type', 'Date issued', 'Author', 'Subject', and 'Publication Affiliation', all currently set to 'Select [Category]'. The bottom of the sidebar has a 'Göttingen University' link.

# GÖTTINGEN RESEARCH ONLINE

## GRO.instruments

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

The screenshot shows the Göttingen Research Online - Instruments homepage. At the top, there's a navigation bar with links for Resources, Providers, People, Groups, Departments/Institutes, Organizations, Projects, and Communities. Below the navigation is a search bar and a filter section with dropdown menus for Type (Any type), Country (Any country), Organization (Any organization), Provider (Any provider), and Category (Any category). A "NEW RESOURCE" button is located below the filter. The main content area features a grid of resource cards. Each card includes a thumbnail image, the resource name, provider, affiliation, resource type, and a star icon for favoriting. Below the grid, there are sections for "Resources" and "Facilities". The "Resources" section has a brief description and a link to "Explore...". The "Facilities" section also has a brief description and a link to "Explore...". At the bottom, there are four summary boxes: "Statistics" (368 users, 274 resources, 39 providers, 6 organizations), "Software" (listing various software packages like Avance III HD, Service Facility, NMR, etc.), and "Avance III HD Service Facility NMR" (with a star icon).

# GÖTTINGEN RESEARCH ONLINE

## GRO.plan

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

The screenshot shows the 'My Projects' page of the GÖTTINGEN RESEARCH ONLINE PLAN. At the top, there's a header bar with the GRO logo and navigation links for 'Language-' and 'My account-'. Below the header, the title 'My Projects' is displayed. A descriptive text explains the process of creating a Data Management Plan (DMP) by defining a project title, research question(s), and catalog of questions. A table header row includes columns for 'Project name', 'My GRO.plan role', 'Creation Date', 'Last updated', 'Selected Catalog', and 'Quick Links'. A prominent button labeled 'Create new project' with a blue icon is located below the table. To the right, there are sections for 'My personal data' (with fields for Name, Email, and a contact link), 'Search projects' (with a search input field), and 'Import as new project' (with a 'Select file' button and an 'Upload' button). At the bottom, there are three footer sections: 'About' (links to About RDMO, Terms and Conditions, Privacy, and Imprint), 'Contact' (Support Team: Göttingen eResearch Alliance, info@eresearch.uni-goettingen.de), and 'Göttingen Research Online' (describing the services: GRO.data, GRO.instruments, and GRO.publications).

**GÖTTINGEN RESEARCH ONLINE PLAN**

My Projects

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.

Project name	My GRO.plan role	Creation Date	Last updated	Selected Catalog	Quick Links
<a href="#">Create new project</a>					

**My personal data**

Name  
Timo Gnadt  
Email  
gnadt@sub.uni-goettingen.de

**Search projects**

Search project title

**Import as new project**

Select file [Upload](#)

**About**

About RDMO  
Terms and Conditions  
Privacy  
Imprint

**Contact**

Support Team: Göttingen eResearch Alliance  
info@eresearch.uni-goettingen.de

**Göttingen Research Online**

Göttingen Research Online bundles various services for Göttingen researchers:  
GRO.data (research data repository)  
GRO.instruments (large equipment portal)  
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

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

Support and Services at the Medical Library



# BBM / SUB Göttingen

The screenshot shows the homepage of the Niedersächsische Staats- und Universitätsbibliothek Göttingen (SUB) website. At the top, there is a dark blue header bar with the SUB logo and the text "NIEDERSÄCHSISCHE STAATS- UND UNIVERSITÄTSBIBLIOTHEK GÖTTINGEN". To the right of the header is a search bar with the placeholder "Catalogues, subjects, website" and a magnifying glass icon. Below the header, there is a navigation bar with links for "Göttingen State and University Library > News", "Deutsch" (German), and a large search icon.

The main content area features a large image of the interior of the library, showing multiple levels of study carrels and a person walking down a spiral staircase. Above this image, there are four smaller images: three letters (Z, H, A) made of books and a row of books spelling "GÖTTINGEN".

On the left side, there is a sidebar with a "News" section and several dropdown menus: "Service monitor & FAQ", "First-time visitor?", "Contact", "Locations & facilities", and "Borrowing & renewing".

The central news section has two main articles:

- 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

On the right side, there are two boxes: "Service monitor" (with icons for a person, a document, and a checkmark) and "COVID-19" (with a small image of a virus). Below these are "Quick links" to "Access e-journals & e-books" and "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?

The screenshot shows the homepage of the Niedersächsische Staats- und Universitätsbibliothek Göttingen. At the top left is the EZB logo. The top right features the Georg-August-Universität Göttingen logo and the SUB logo. The main navigation bar includes links for "Elektronische Zeitschriftenbibliothek" and "Niedersächsische Staats- und Universitätsbibliothek Göttingen". Below the navigation is a search bar with the placeholder "Zeitschrift" and a "suchen" button. To the right of the search bar is a link "Erweiterte Suche". A sidebar on the left contains links for "Zeitschriften", "Bibliothek", and "Information & Service". The main content area displays a table titled "Zeitschriftenliste nach Fachgebiet" with columns for "Fachgebiet" and "Anzahl". The table lists various academic disciplines with their respective counts. To the right of the table is a section titled "Die Volltexte der Zeitschriften sind" with four color-coded icons: green (free), yellow (for university members), orange (part of the year), and red (not available). A link "Nutzungsbedingungen" is also present.

You need to register once as user of the library system with your UMG staff card and receive a password

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>

## Prerequisite:

Your data must be entered once in the lending system in the library, then you will receive a password. With this data you can then log in to use the licensed e-resources.

The screenshot shows the SUB (Niedersächsische Staats- und Universitätsbibliothek Göttingen) website. At the top, there is a dark blue header with the SUB logo and the text "NIEDERSÄCHSISCHE STAATS- UND UNIVERSITÄTSBIBLIOTHEK GÖTTINGEN". On the far right of the header, there is a small button labeled "Catalogue". Below the header, the page title "E-Resources" is displayed. To the left of the main content area, there is a sidebar with several dropdown menu items: "News", "Service monitor & FAQ", "First-time visitor?", "Contact", "Locations & facilities", "Borrowing & renewing", "Copying & digitising", "Subjects", and "Collections & Historical Holdings". The main content area starts with a section titled "E-Resources" which contains text about accessing electronic journals, e-books, and databases via the Göttingen University Catalogue (GUK), the Electronic Journals Library (EZB), or the Database Information System (DBIS). It also mentions open access publications and different access rights for licensed e-media based on user location. Below this, there is a list of two points regarding access within and outside the campus network. At the bottom of the main content area, there is a note about terms of use.

Göttingen State and University Library > Digital library > E-Resources

**E-Resources**

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.

The screenshot shows the official website of the Niedersächsische Staats- und Universitätsbibliothek Göttingen (SUB). The header features the SUB logo and the text "NIEDERSÄCHSISCHE STAATS- UND UNIVERSITÄTSBIBLIOTHEK GÖTTINGEN". A navigation bar includes a link to "Catalogues". Below the header, a photograph shows a modern staircase with people walking up and down, leading into a bright library interior filled with bookshelves. The main content area has a sidebar with links like "News", "Service monitor & FAQ", "First-time visitor?", "Contact", "Locations & facilities", "Borrowing & renewing", and "Copying & digitising". The main column features a section titled "Courses & guided library tours" with descriptive text and links to "Deutsch" and "Virtual coaching".

**Courses & guided library tours**

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.

**Virtual coaching**

# Online offers for download:

The screenshot shows the SUB Göttingen website. At the top left is the logo 'SUB | NIEDERSÄCHSISCHE UNIVERSITÄTSBIBLIOTHEK GÖTTINGEN'. Below it is a navigation bar with links: 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 (highlighted with a green arrow), Individual & group work spaces, and Textbooks & semester.

The main content area has two sections:

- Medizin**
  - Bibliotheksralley 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)
- Wirtschaftswissenschaften**
  - Bibliotheksralley 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

At the bottom of the page are links for Sitemap, Kontakt, Impressum, Datenschutzhinweis (Opt-Out), Feedback, and Short URL. The footer contains sections for SUB Göttingen, Universität Göttingen, and Stadt Göttingen, along with a 'Letzte Änderung 25.10.2018' note.

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

**Then scroll down to „Medicine“**

# Open Access consultation

The screenshot shows the left sidebar menu of the university's website. Two green arrows point to the 'Open Access' section in the menu. The 'Open Access' section is highlighted with a grey background. Below it, there is a detailed description of the Open Access Leitlinie 2016, contact information for Sabine Witt, and a list of services related to publishing.

**Open Access an der Universität Göttingen**

Die Georg-August-Universität Göttingen (einschließlich der Universitätsmedizin) hat 2016 eine neue Open-Access-Leitlinie (PDF 1,9 MB), Seite 1895 - 1896, beschlossen und „verfolgt das Ziel, die wissenschaftlichen Ergebnisse ihrer Wissenschaftler und Wissenschaftlerinnen möglichst breit öffentlich zugänglich und nutzbar zu machen. Open Access bereitgestellte Publikationen lassen sich ohne Zugriffsbeschränkungen nutzen. Dies befördert unmittelbar und nachhaltig Forschungs- und Innovationsprozesse in Wissenschaft, Wirtschaft und Gesellschaft. ... Mandate wie das der Europäischen Kommission und des Europäischen Forschungsrates machen die Umsetzung von Open Access für alle geforderten Projekte verbindlich. Diese Leitlinie setzt einen allgemeinen Empfehlungsrahmen für Open Access an der Universität und ergänzt die von der Universität Göttingen verabschiedete Leitlinie zu Forschungsdaten.“ Die Leitlinie aus dem Jahr 2016 ersetzt die Open-Access-Resolution (PDF 248 KB) der Universität Göttingen von Dezember 2005.

Weitere Unterstützung bietet das Angebot der Göttingen eResearch Alliance. Sie berät Themen wie z. B. Forschungsdatenmanagement, Entwicklung von Datenstrategien für Forschungsprojekte u. a. Darüberhinaus betreibt die SUB Göttingen ein Open-Access-Referat sowie einen Publikationsfonds. Sie engagiert sich in nationalen und internationalen Projekten wie Confederation of Open Access Repositories (COAR) und OpenAIRE. Das EU-Hochschulbüro der Universität Göttingen informiert auf seiner Internetseite detailliert über den Open-Access-Pilot der Europäischen Union.

Auf unseren Webseiten finden Sie Informationen zu Fragestellungen wie

- Open Access in den Disziplinen: Präsentation zu Open Access in der Universitätsmedizin Göttingen (PDF 4,5 MB)
- Gibt es für das Publizieren in Open-Access-Journalen oder bei Verlagen Verlagsvereinbarungen oder Publikationsbeihilfen?
- Ich habe der SUB Göttingen für meine Publikationen eine Rechteübertragung vor 2007 übertragen und möchte hierzu nochmals die Infos nachlesen?
- Wo finde ich was zum Thema Verlagspolicies?

**Sabine Witt**  
  
Platz der Göttinger Sieben 1  
37073 Göttingen, Germany  
+49 551 39-5290 (Tel.)  
witt@sub.uni-goettingen.de

Bestände  
Digitale Bibliothek  
Elektronisches Publizieren  
Publizieren  
Universitätsverlag Göttingen  
Open Science  
**Open Access**  
Wo finde ich was?  
Open-Access-Publikationsfonds  
Verlagsvereinbarungen  
Rechtliches  
Lernen & Lehren  
Projekte & Forschung  
Spenden & Fördern  
Wir über uns  
SUB A - Z

GEORG-AUGUST-UNIVERSITÄT GÖTTINGEN

Webseitensuche Letzte Änderungen Sitemap Kontakt Impressum Datenschutzhinweis (Opt-Out) Feedback 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



NEUIGKEITEN

DIENSTE ▾

FORSCHUNG & LEHRE

ÜBER UNS

SUPPORT

ANMELDEN

EN DE

A background image depicting a large, fluffy white cloud against a dark blue background. Inside the cloud, there are several glowing blue rectangles representing data blocks. To the left, there's a vertical column of icons: an envelope, a circular arrow, another envelope, a left arrow, and another envelope. To the right, there's a partial view of a smartphone and a laptop screen showing binary code. The overall theme is digital communication and cloud technology.

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

## GWDG CLOUD SERVER

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

# Portfolio Services for the Sciences



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

 CentOS 8.5 Server x86_64	 CentOS 7.1 Server x86_64	 Debian 7.8 Server x86_64
 Fedora 20 Desktop Gnome x86_64	 Fedora 20 Desktop KDE x86_64	 Fedora 20 Server x86_64
 openSUSE 13.1 Desktop Gnome x86_64	 openSUSE 13.1 Desktop KDE x86_64	 openSUSE 13.1 Server x86_64
 Scientific Linux 6.6 Server x86_64	 Scientific Linux 7.1 Server x86_64	 Ubuntu 12.04.5 LTS Server x86_64

## Kollaboration

- Hosted, private wiki (*eMail to [support@gwdg.de](mailto:support@gwdg.de)*)
- Own Mailinglists: <https://www.gwdg.de/e-mail-collaboration/mailing-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)

# Example collaborative work

## Video conferencing



### Diverse solutions and platforms

## VIDEOCONFERENCING

The general [GWDG](#) offer for videoconferencing is the DFNconf service. It is operated by the DFN-Verein, of which the [GWDG](#), [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 [GWDG](#) 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 GWDG

- [BigBlueButton](#) (operated by the [GWDG](#)): After a successful test operation at the [GWDG](#), 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 [GWDG](#)): Open source solution, suitable for videoconferencing with smaller numbers of participants. With more than 10 participants the quality fluctuates. A [GWDG](#) 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 GWDG
  - 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 GWDG

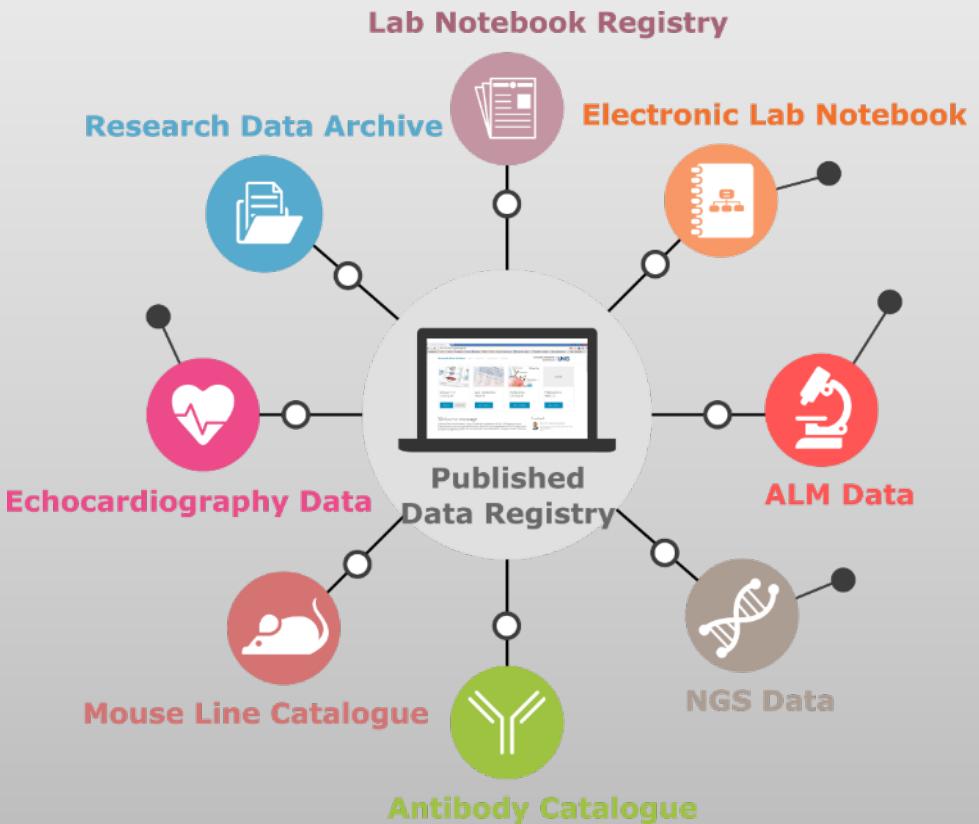
Project specific example

## DFG Collaborative Research Center 1002



### 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](tel:+495512011523)

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**



Sie  
befinden  
sich hier

Geschäftsstelle der EK  
Von Siebold-Str. 3

# „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 an 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:

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

# Persons of contact

- ▶ Chairman: Prof. Dr. Brockmöller
- ▶ 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”
- ▶ MPG-Studies (studies involving medical devices)  
Studies regulated by “Medizinproduktegesetz”

# Studies (2)

## ► “other Studies”

- Research projects with “Beratungspflicht” by MBO  
(Operating researchers are obliged to consult the Ethik-Kommission’s advice)
- Possibility of accepting the vote of another Ethik-Kommission (Übernahmeveratum)
- Retrospective data analysis studies: possibility of a shortened approval process

# Comprehensive consultation:

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

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

# 4. Datenschutzbeauftragter der UMG

Dr. Thomas Langbein

## Research and Data Protection

**Germanys constitution (GG):**

1. Derived from Art 1 and 2 → Right of informational self-determination
2. Freedom of Research and Teaching, Art 5(3) GG



**Personal data are subjected to the national Laws of data protection and – since 25th of May 2018 – also European legislation**

# Research and Data Protection

## Laws:

- German Data Protection Act (BDSG)
- Federal Data Protection Laws (e.g. NDSG)
- European General Data Protection Regulation (GDPR/  
EU-DSGVO)



**On principle: Processing of personal data is prohibited ... except it is allowed by other laws or regulations OR by permission of the person concerned. („Prohibition with Reservation of authorisation“)**

# Research and Data Protection

**But: There are special facilities for research projects!**

**DSGVO: Article 89** *Safeguards and derogations relating to processing for archiving purposes in the public interest, scientific or historical research purposes or statistical purposes* (*Link: <https://gdpr-info.eu/art-89-gdpr/>*)

**Lower Saxony Law of Data Protection (NDSG)**: § 13  
**Processing of personal data in research projects**

(Link:  
[http://www.voris.niedersachsen.de/jportal/portal/t/124p/page/bsvorispro.d.psml/action/portlets.jw.MainAction?p1=j&eventSubmit\\_doNavigate=searchInSubtreeTOC&showdoccase=1&doc.hl=0&doc.id=jlr-DSGND2018pP13&doc.part=S&toc.poskey=#focuspoint](http://www.voris.niedersachsen.de/jportal/portal/t/124p/page/bsvorispro.d.psml/action/portlets.jw.MainAction?p1=j&eventSubmit_doNavigate=searchInSubtreeTOC&showdoccase=1&doc.hl=0&doc.id=jlr-DSGND2018pP13&doc.part=S&toc.poskey=#focuspoint))

**German Law of Data Protection (BDSG neu): § 27 – Data processing for scientific or historical or statistical purposes**

(Link: <https://dejure.org/gesetze/BDSG/27.html>)

## Research and Data Protection

Declaration of confidentiality (*see page 6*)

Data access agreement (*see page 7*)

TMF-Working Groups to data protection in research projects

(Link: [http://www.tmf-ev.de/Arbeitsgruppen\\_Foren/AGDS.aspx](http://www.tmf-ev.de/Arbeitsgruppen_Foren/AGDS.aspx))

# Research and Data Protection

## Declaration of confidentiality

### VERPFLICHTUNG AUF DIE VERTRAULICHKEIT

Im Rahmen der Dokumentations- und Nachweispflichten des Art. 5 Abs. 2 DS-GVO (Accountability) ist die Verpflichtung der zur Verarbeitung befugten Personen auch weiterhin als probates Mittel anzusehen, um die Einhaltung datenschutzrechtlicher Vorschriften von vornherein zu gewährleisten. Dies zeigt sich unter anderem am Regime der Auftragsverarbeitung (AV), welches in Art. 28 Abs. 3 lit. b DS-GVO die Verpflichtung auf die Vertraulichkeit zumindest beim Dienstleister ausdrücklich als Pflichtinhalt des AV-Vertrages vorsieht.

Darüber hinaus legt Art. 32 Abs. 4 DS-GVO fest, dass sowohl Verantwortliche als auch Auftragsverarbeiter Schritte zu unternehmen haben, um sicherzustellen, dass die unterstellten Personen mit Zugang zu personenbezogenen Daten nur auf Anweisung des Verantwortlichen tätig werden. Art. 29 DS-GVO bezieht sich ebenfalls auf diese eindeutig weisungsabhängige Verarbeitung. Hierzu gehört es, unmissverständlich auf die Bedeutung und den Umfang datenschutzrechtlicher Regeln hinzuweisen und Mitarbeitern etwaige Risiken von Gesetzesverstößen vor Augen zu führen.

Der Bundesgesetzgeber hat im Rahmen der Umsetzung der Richtlinie 2016/680/EU für den Datenschutz in Polizei und Justiz an der förmlichen Verpflichtung festgehalten. § 53 BDSG n.F. verwendet insoweit sogar den hergebrachten Begriff des Datengeheimnisses. Was im öffentlichen Bereich recht ist, kann daher im nicht-öffentlichen Bereich nur billig sein.

Bei berufs- und standesrechtlicher Verschwiegenheitspflicht ist das Weglassen einer Verpflichtung für mitwirkende Personen gem. § 203 Abs. 4 Satz 2 Nr. 1 StGB ggf. sogar strafbewehrt, falls die mitwirkende Person unbefugt fremde Geheimnisse offenbart.

# Research and Data Protection

## Data access agreement

UNIVERSITÄTSMEDIZIN ■■■ UMG  
GÖTTINGEN ■■■

Datenschutzbeauftragter der UMG  
Tel.: 0551 39 22762  
E-Mail: datenschutz@med.uni-goettingen.de

### Datenzugriffsvereinbarung/2017

Bitte ausgefüllt (Seite 1-2) an den Datenschutzbeauftragten senden. Falls keine Rückfragen sind, erhält der Antragstellende Seite 1 zurück und kann damit im Zentralarchiv die benötigten Patientenakten anfordern bzw. bei elektronischem Zugriff einen ixserv-Account im G3-7 Informations-technologie (Sachgebiet Klinische Systeme) beantragen.

An den  
Datenschutzbeauftragten der Universitätsmedizin Göttingen

Telelift 142

Per Fax: 39 - 12726      Als gescanntes Dokument (PDF) an: datenschutz@med.uni-goettingen.de

#### 1. Persönliche Daten des/der Antragstellenden

Name	
Privatanschrift	
Telefon/E-Mail	
Abteilung/Klinik	

#### 2. Thema des Forschungsvorhabens:

(Leeres Feld für handschriftliche Angabe)

3. Zweck:  Promotion  Habilitation  Sonstiges Forschungsvorhaben

4. Folgende Patientendaten werden benötigt (z.B. Patienten der Klinik...Zeitraum...Diagnose ...):

(Leeres Feld für handschriftliche Angabe)

→ weiter mit Nr.5

—————  
Unterschrift des Datenschutzbeauftragten

Stand 02/2016

—————  
Unterschrift der Archivleitung bzw. der Leitung der  
speichernden Stelle

1

# Research and Data Protection

## Keep in contact



**Dr. Thomas Langbein**  
Tel.: 39-22762  
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. Bredenkamp, 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, 39-4987)*
- ▷ **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 utilisation of highly specialised equipment. In addition, the transfer of subject matter expertise is promoted and optimised.

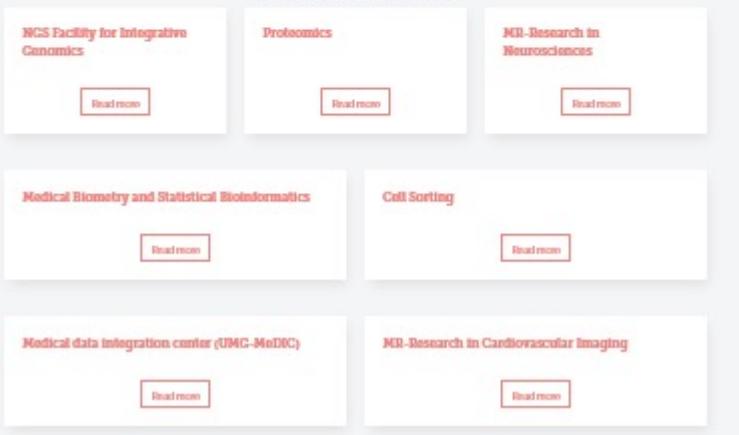
The UMG has three central core facilities. In addition, six scientific core facilities are established and linked to scientific departments of the UMG in order to ensure long-term high standard methodical expertise.

**Central core facilities**



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

**Scientific core facilities**



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

DFG-Vordruck 55.04 – 12/20

Seite 1 von 13

## 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

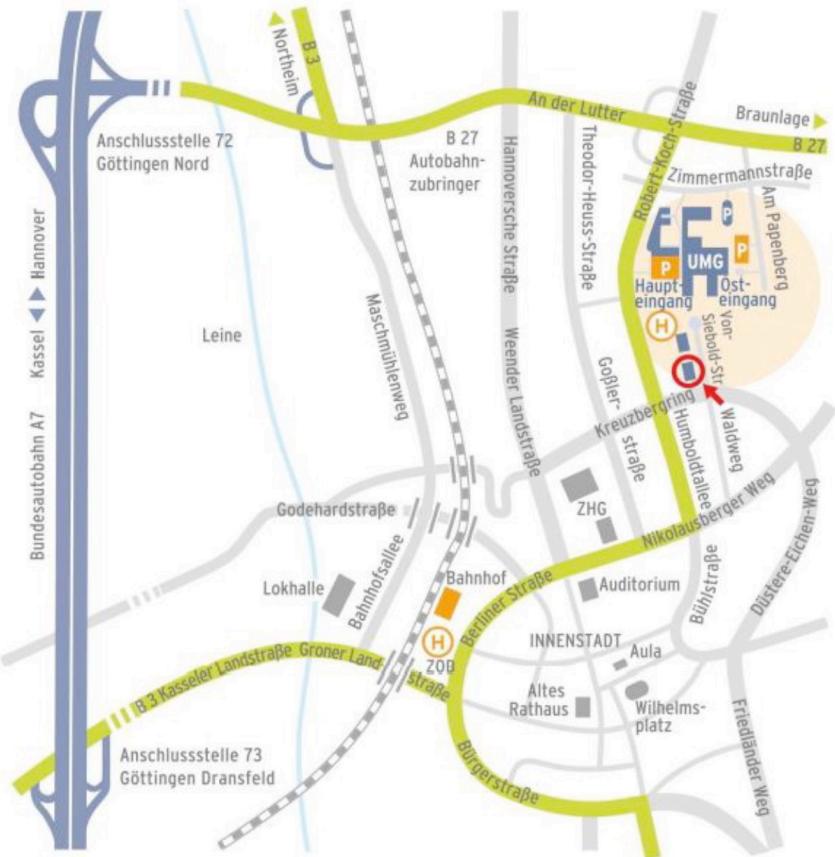
## Hinweise

zu Gerätenutzungskosten und zu Gerätzentren

- 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 – Forschung und EU-Büro



**Forschung und EU-Büro**  
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

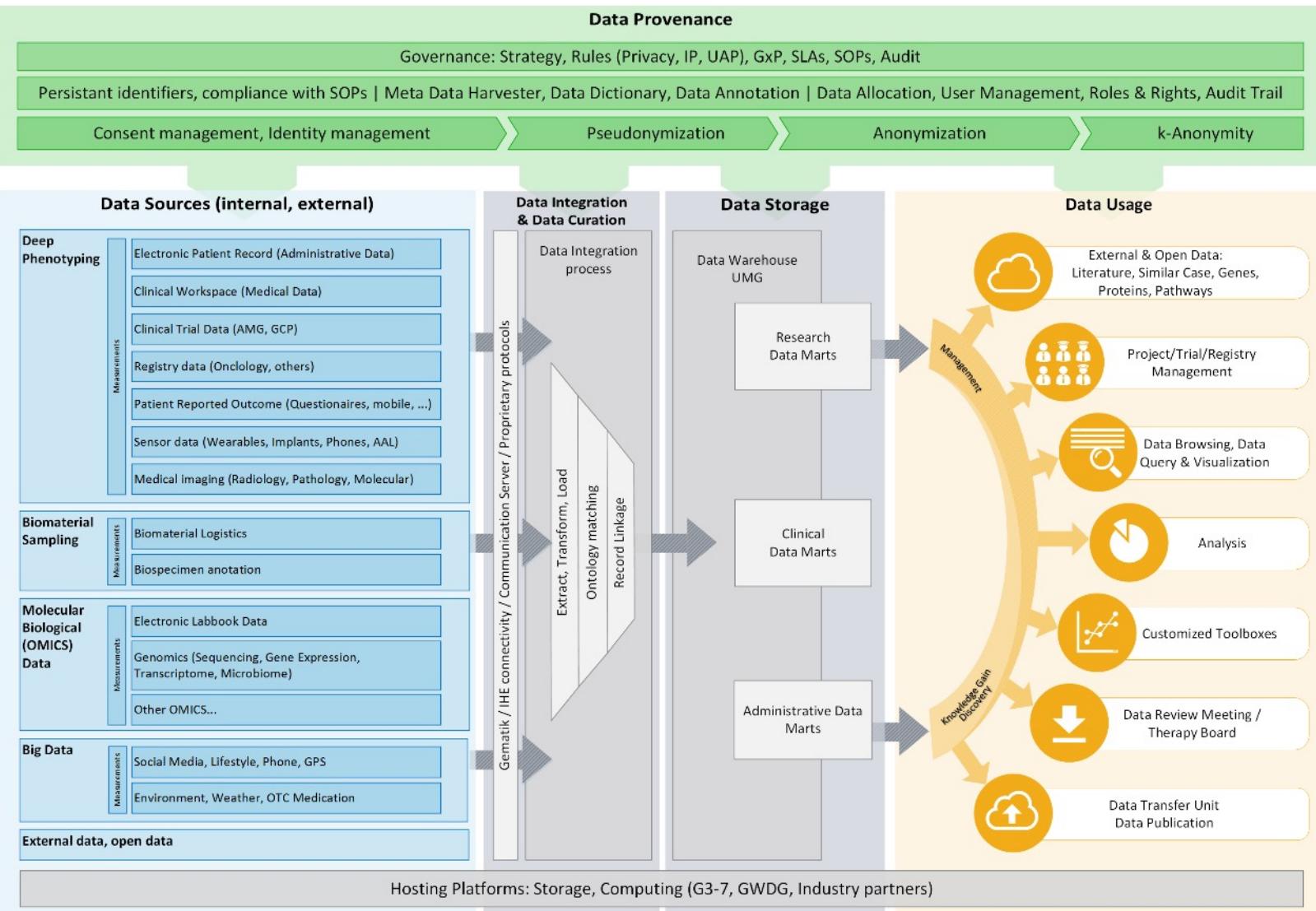
[mi.med.uni-goettingen.de](http://mi.med.uni-goettingen.de)



## 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



## Example services

- Clinical Case Study: Investigation of rare cases in the children's hospital
- Pseudonymization of sensitive patient data: Multiple sclerosis
- Disease registers: European multiple sclerosis register (EUReMS)
- OMICS Data management: Systems medicine-consortia sysINFLAME, Deutsches Zentrum für Herz- und Kreislaufforschung (DZHK)
- Long-term analysis of data: Nationales Demenz-Netz
- IT-infrastructures for stem cell-research: DZHK
- INF-project of a Collaborative Research Center: Cardiology CRC 1002
- National consortia: Psychiatrie Netzwerk, Deutsches Zentrum für Herz- und Kreislaufforschung

## Contact persons at Department of Medical Informatics

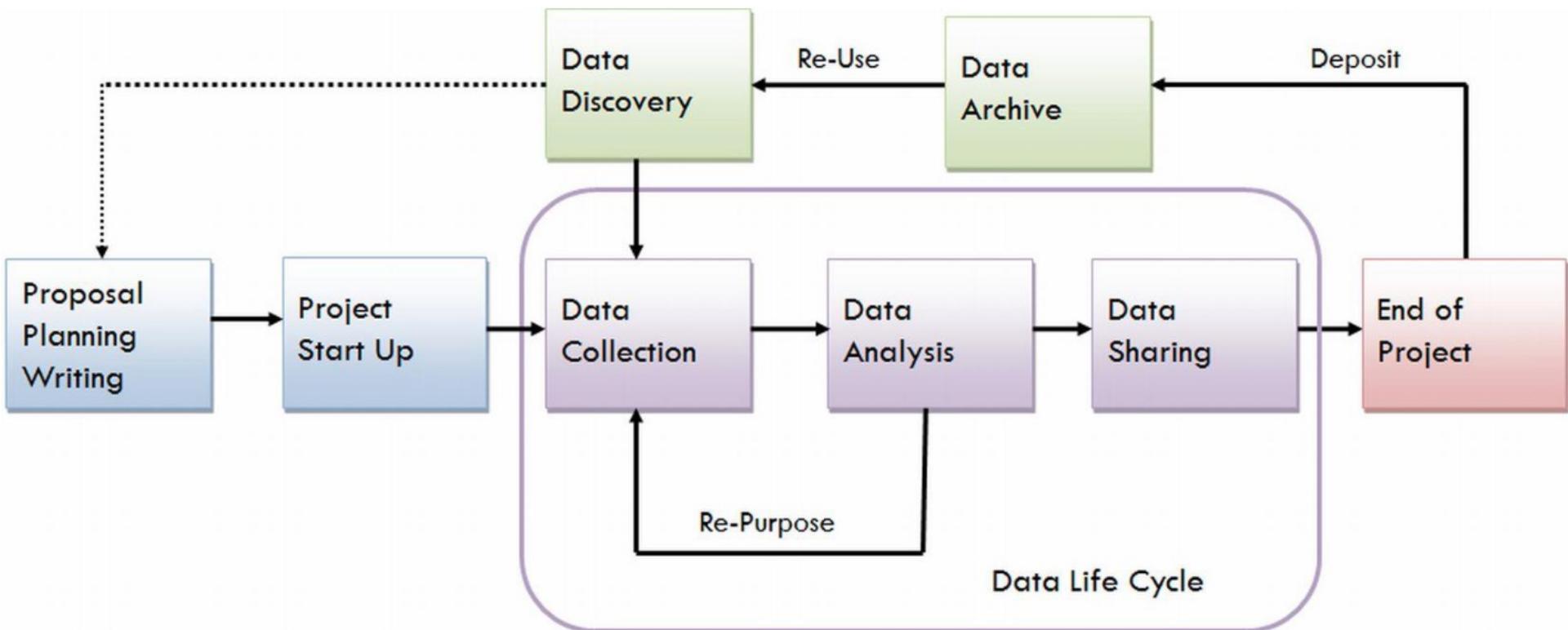
Prof. Dr. Dagmar Krefting	Head of Department
Prof. Dr. Ulrich Sax	IT-infrastructures for translational research
Sabine Hanß	IT-infrastructures for clinical collaborative research
Prof. Dr. Tibor Kesztyüs	Medizinisches Forschungs-Daten-Integrations-Centrum (UMG-MeDIC)
Kerstin Pischek-Koch	Intersectoral research
Dr. Harald Kusch	IT infrastructures in biomedical basic research Contact to Göttingen eResearch Alliance



## 7. Core Facility

*Medical biometry and Statistical Bioinformatics*

Dr. Andreas Leha

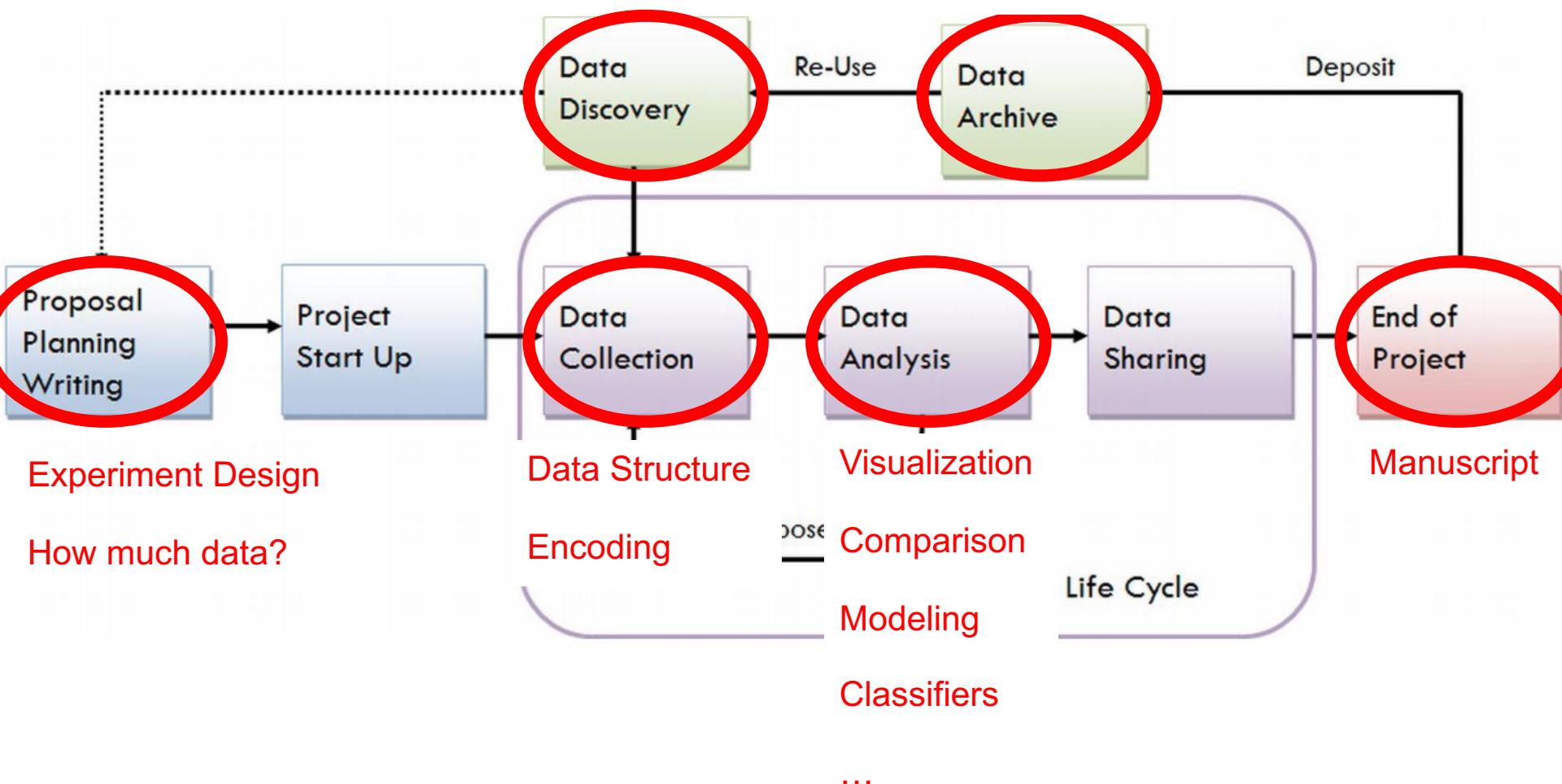


Courtesy of University of Virginia Library <https://data.library.virginia.edu/files/Research-Life-Cycle-LG>

## MetaAnalyses

Public  
Repositories  
(e.g. TCGA)

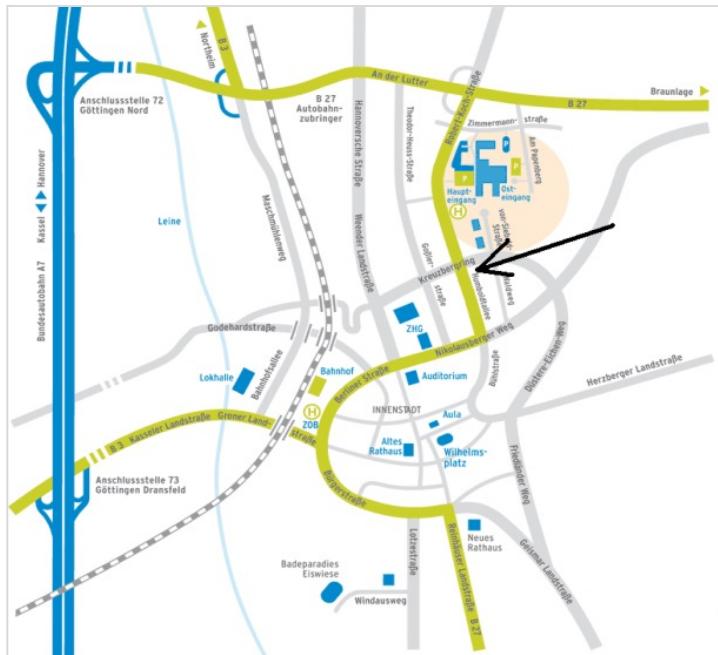
GRO.data  
Zenodo+github  
GEO / SRA  
PRIDE



# 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 **E-Mail**  
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/](http://medstat.umg.eu/forschung/wissenschaftliche-serviceeinheit/statistische-beratung/)



# Core Facility

## *Medical Biometry and Statistical Bioinformatics*

### Coached working

- ▶ Assistance with statistics- and bioinformatics-software
- ▶ Location:
  - ▶ CIP-pool of the Department of Medical Statistics
  - ▶ Learning Ressource Center (Medical Library)
  - ▶ currently **online via video conference**
- ▶ No prior appointment necessary
- ▶ Time schedule available website

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



current team of student assistants



# Core Facility

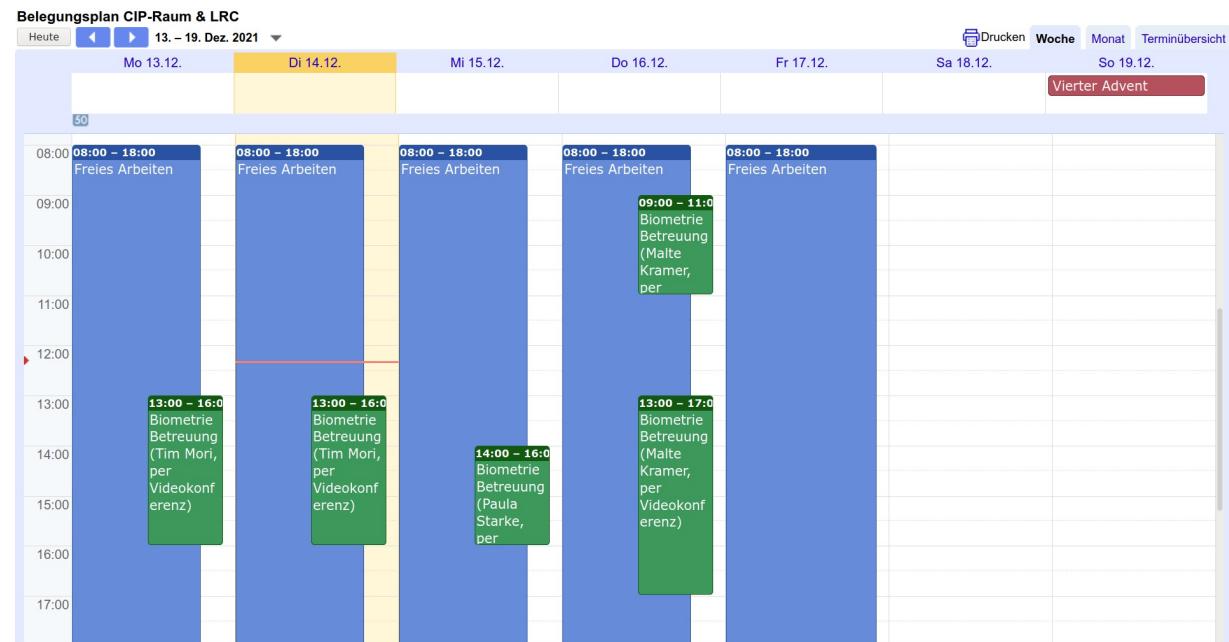
## Medical Biometry and Statistical Bioinformatics

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

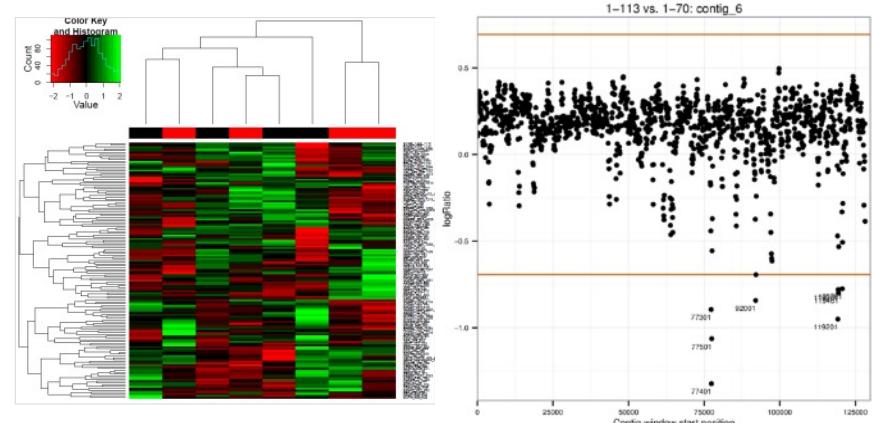


# Core Facility

## *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

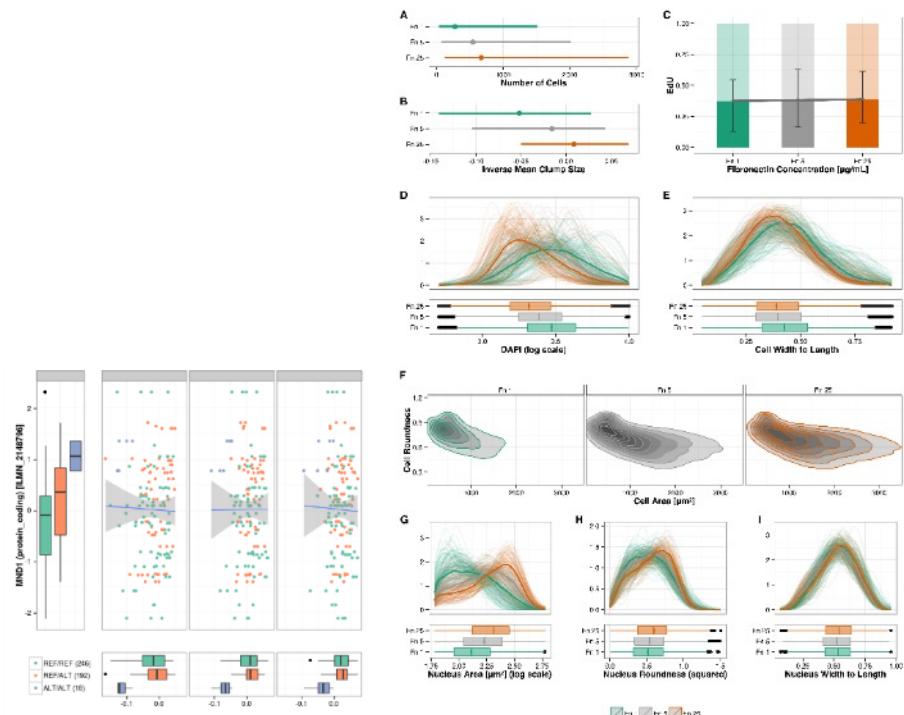


# Core Facility

## *Medical Biometry and Statistical Bioinformatics*

### Project-related support

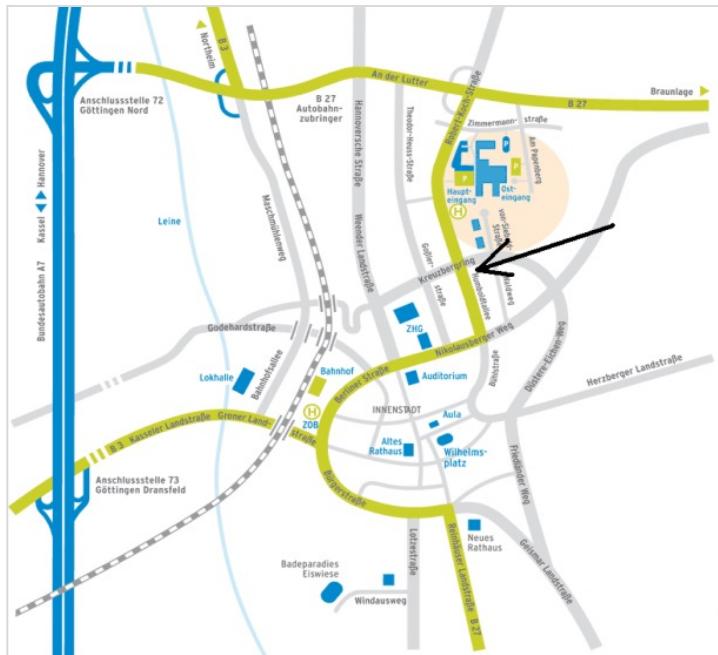
- ▶ We recommend early involvement (i.e. already in the planning phase)
- ▶ Appointment via our web form preferred (department homepage)
- ▶ There will be an invoice
  1. Discussion of project
  2. Cost estimate based on time effort
  3. Service request



# Core Facility

# ***Medical Biometry and Statistical Bioinformatics***

# Contact



# 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 **E-Mail**  
medstat.umg.eu/forschung/wissenschaftliche-serviceeinheit/ **Website**

# 8. Services of the Central Biobank UMG

PD Dr. Sara Nußbeck

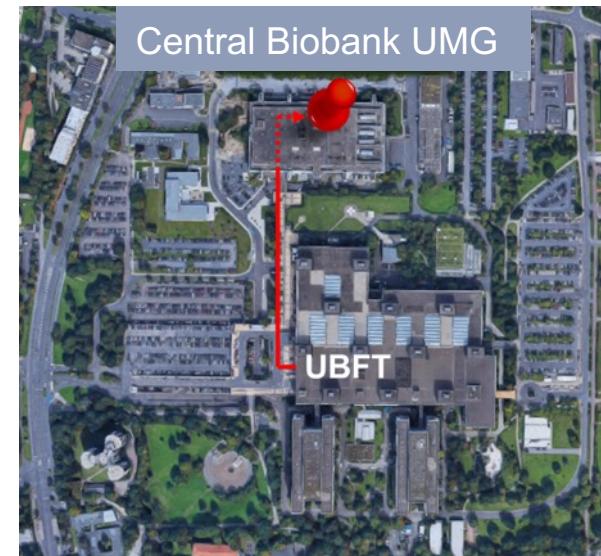
## 8. Services of the Central Core Facility Central Biobank UMG



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°C
  - in the vapour phase of LN<sub>2</sub>
  - at room temperature (FFPE and slides)
- Retrieval of selected biospecimen
- Cooled transport and shipping
- Founding member of the biobank excellence network



German  
Biobank Node  
bbmri.de

# Infrastructure

- Sufficient structured storage capacity
- Backup-systems and equipment
  - High reliability of storage by redundancies in cooling and high and use of LN<sub>2</sub> tanks and back-up
  - Two independent temperature monitoring systems (24/7)
- Clearly marked 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



# Equipment of the Central Biobank UMG



Innenleben des Lagerroboters

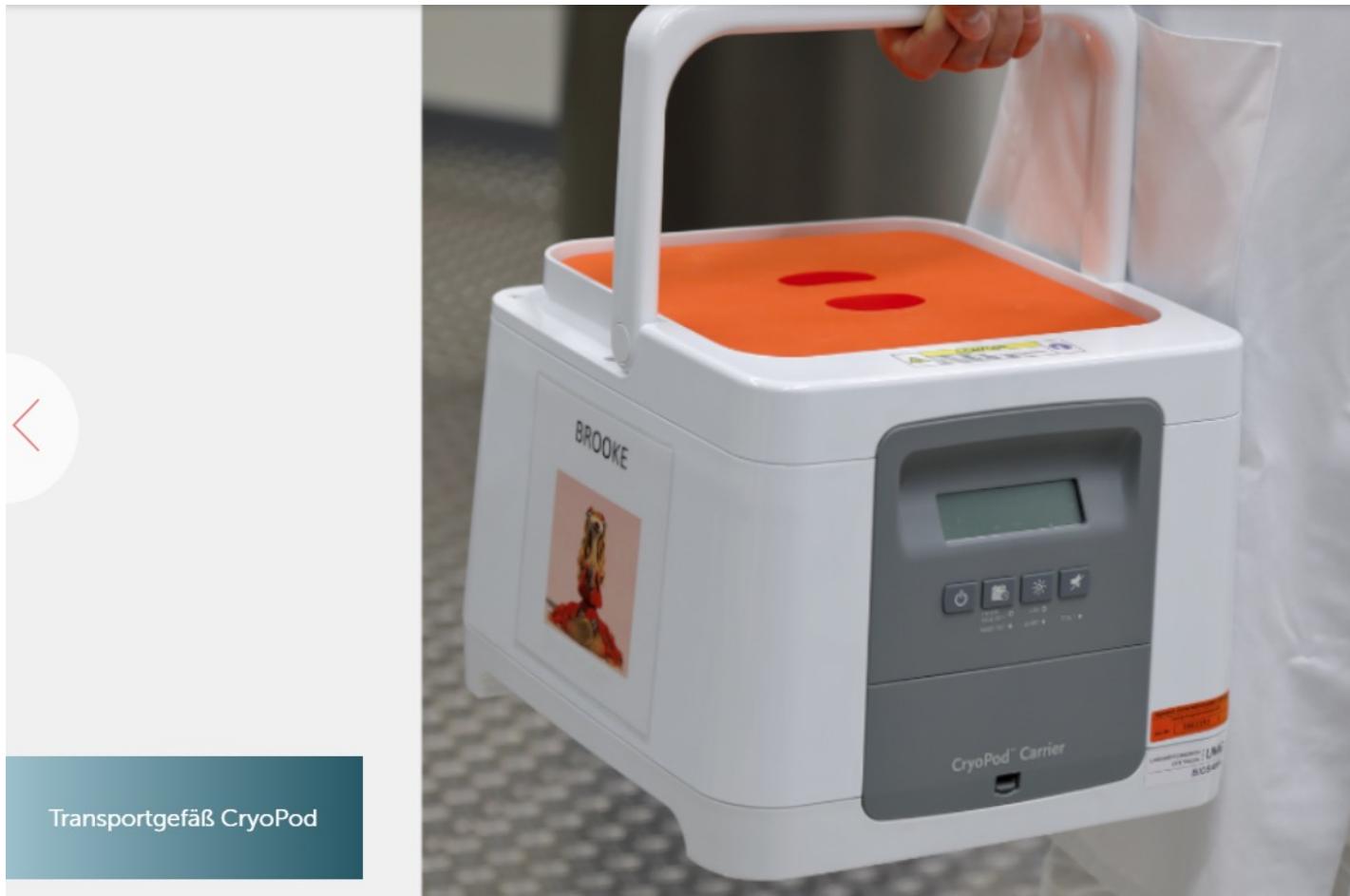
# Equipment of the Central Biobank UMG



# Equipment of the Central Biobank UMG



# Equipment of the Central Biobank UMG



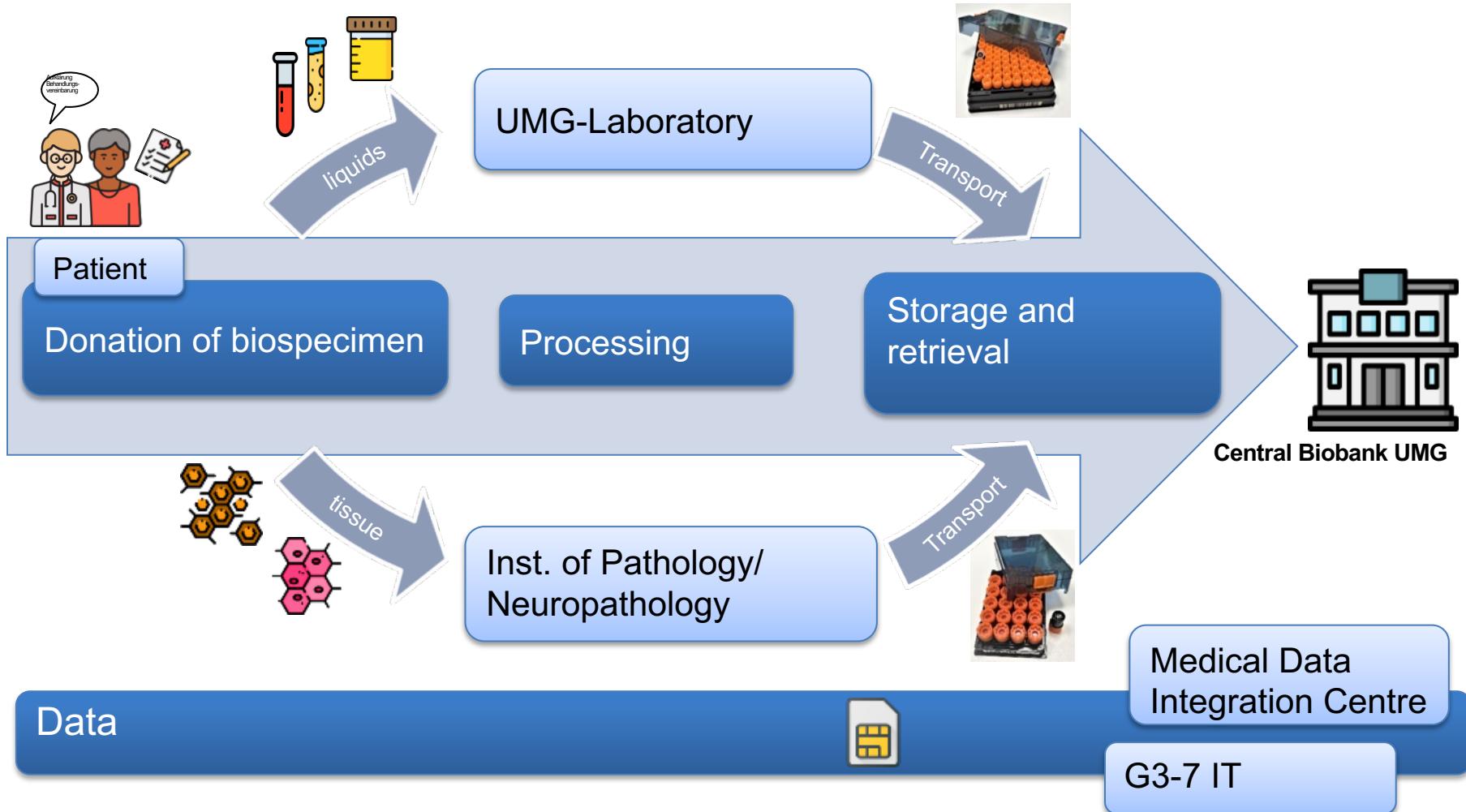
# Equipment of the Central Biobank UMG



# Additional features of the Central Biobank UMG

- Quality assured and quality controlled, traceable documentation of samples and metadata (accreditation according to ISO 20387:2018 in preparation)
- 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
- Study 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



PD Dr. Sara Nußbeck  
Head



Dr. Sandra Seelke  
Dept. Head & Head of  
Laboratory



Manuela Becker  
Technician



Dr. Mareike Derkx  
Project manager



Jutta Engelmayer  
Technician in UMG-  
Labor



Monique Küffer  
Technician in Inst. of  
Pathology



Uta Buch  
Quality Manager



Jakob Keller  
Data manager



Jeannette Löser  
PR and Finances



Dr. Christina Thiesler  
Project manager



Andreas Bartussek  
Informaticist



Lea Pappe  
Student assistant  
(NAPKON Study)

<https://biobank.umg.eu>

For suggestions and questions please contact us: -65700 or biobank@med.uni-goettingen.de

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

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