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

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Zentrale Biobank, UMG
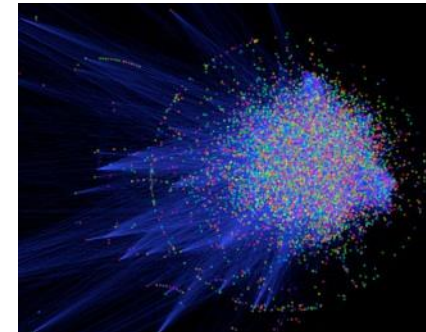**Timo Henne**
eResearch Alliance

Agenda
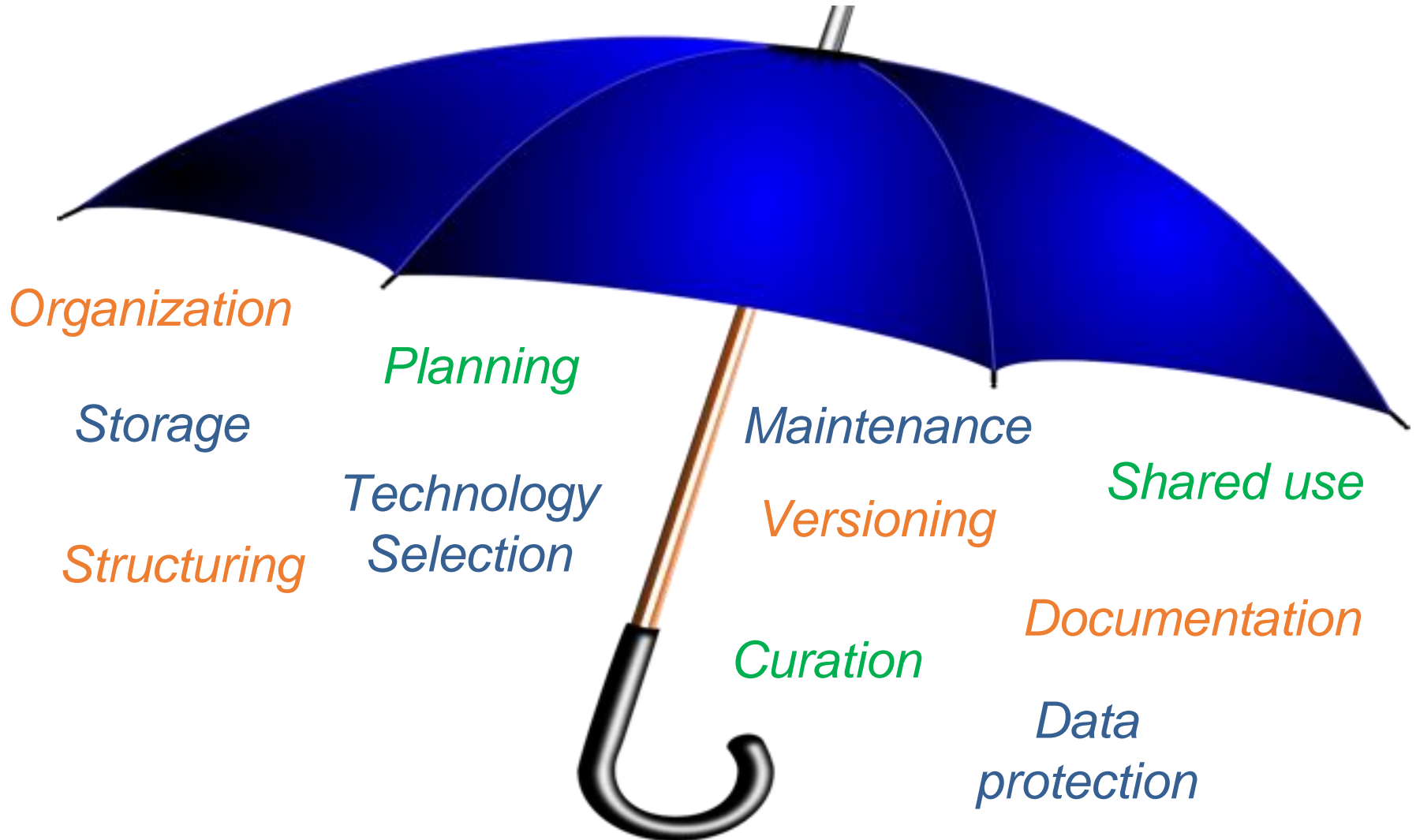
1. Management of Research Data

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?

Organization

Planning

Storage

Maintenance

Technology Selection

Shared use

Versioning

Structuring

Documentation

Curation

Data protection

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?

www.digitalbevaring.dk

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?

FAIR data principles

✓ **Findable:** have sufficiently rich metadata and a unique and persistent identifier.

✓ **Accessible:** retrievable by humans and machines through a standard protocol; open and free; authentication and authorization where necessary.

✓ **Interoperable:** metadata use a 'formal, accessible, shared, and broadly applicable language for knowledge representation'.

✓ **Reusable:** metadata provide rich and accurate information; clear usage license; detailed provenance.

Wilkinson, M. D et al. (2016). The FAIR Guiding Principles for scientific data management and stewardship. *Scientific Data*, 3(1). https://doi.org/10.1038/sdata.2016.18

Research Data Policy of Göttingen University incl. UMG

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

Research Data Policy of Göttingen University incl. UMG

- Officially issued on 28th August 2014, revision in 2023
- One of the first German universities with such a policy

- Topics addressed:
  - FAIR data principles
  - Research Data, Research Data Management and its purposes
  - Responsibilities for Data Management
  - Data Management Plans
  - Support, training and provision of services
  - Storage locations and solutions
  - Ethical and legal standards
  - Open Access

- *e*Research Alliance: support and advice on the implementation of the policy for the Göttingen Campus

*e*Research = *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 and Transfer 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
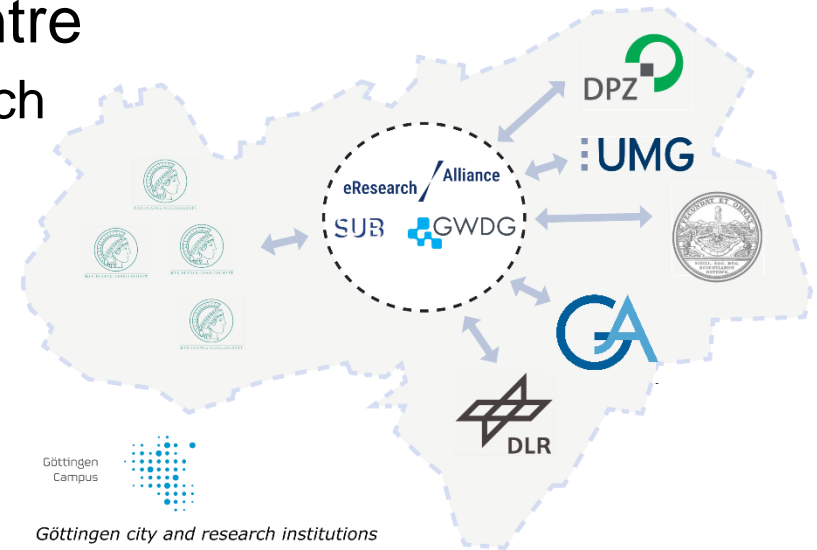
eRA Services

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**R**ESEARCH**O**NLINE

Publications	**Data**	**Instruments**	**Plan**	...
Publication data management	Research data repository	Large equipment portal	Data management planning	more services
Dspace-CRIS	*Dataverse*	*openIRIS*	*RDMO*	

GRO.data

- Research Data Repository

- Based on Dataverse

- For all disciplines

- Storage, exchange, publication

- DOIs upon publication

- Individual management of access rights and roles

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

GRO.instruments

- Campus-wide registration and administration of large equipment

- Central information hub for researchers and administration

- Booking functionality for researchers on campus

GÖTTINGENRESEARCHONLINE

GRO.plan

- Data management planning tool

- Based on RDMO

- Versioning and sharing of DMPs

- Goal: campus-specific support

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

At www.sub.uni-goettingen.de you can find all information regarding the SUB, including all service offers online and offline

GEORG-AUGUST-UNIVERSITÄT GÖTTINGEN

NIEDERSÄCHSISCHE STAATS- UND UNIVERSITÄTSBIBLIOTHEK GÖTTINGEN | SUB

Accessing electronic resources from home?

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

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/

Online offers for download:

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

Then scroll down to
„Medicine"

Medizin

- Endnote-Selbstlernkurs (PDF 331 KB)
- Literaturrecherche-Selbstlernkurs Medizin (PDF 599 KB)
- PubMed für Medizinstudierende (PDF 291 KB)
- Zotero-Selbstlernkurs für Medizinstudierende (PDF 695 KB)
- Zugriffsmöglichkeiten auf Volltexte von Zeitschriftenaufsätzen für Medizin-Studierende (PDF 1,4 MB)
- Workshop Einstieg in die 3D-Welt (PDF 9,5 MB)

Open Access consultation

On the SUB homepage, click on „Publishing & Open Access" ->„Open Science & 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

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

2.2. Computing Services (GWDG)

Prof. Dr. Philipp Wieder

Professor Dr Philipp Wieder

IT-Innovation- & Computing Centre

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

GWDG

NEWS SERVICES COMPUTING DATA RESEARCH & EDUCATION ABOUT US ACADEMY SUPPORT 👤 MY ACADEMICID DE EN 🔍

GWDG Gesellschaft für wissenschaftliche Datenverarbeitung mbH Göttingen

MAX PLANCK GESELLSCHAFT

GEORG-AUGUST-UNIVERSITÄT GÖTTINGEN
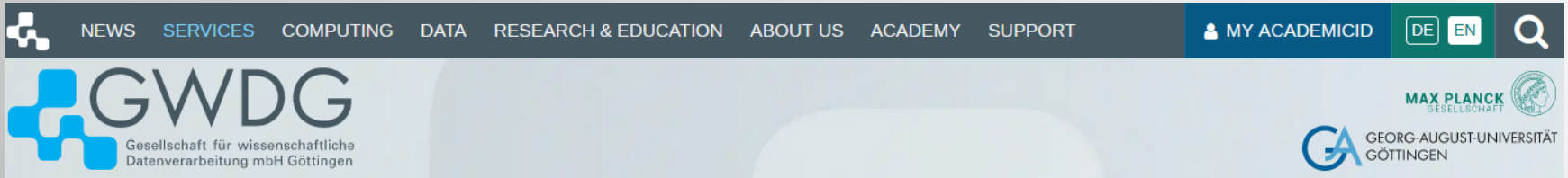
SERVICES

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

Application Services
- Application and Event Management
- Bioinformatics Programs
- Databases
- Jupyter
- Library Service Aleph
- Library Service Koha
- Online Surveys
- Plagiarism Prevention
- Pseudonymisation and Data Trusteeship
- STACK-Maxima
- Statistics Programs

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

General services
- Computer Lending Pool
- Identity and Access Management [MPG]
- Identity and Access Management [Uni]
- Large Format Printing
- Large Format Scanner
- Print Server
- Single Sign-on (SSO) / Authentication and Authorization Infrastructure (AAI)
- Software and Licence Management
- Standard Printing
- URL Shortener
- Videoconferencing

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

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

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

IT security services
- Public Key Infrastructure (PKI)
- Virus Protection
- Vulnerability Scans on Network-attached Equipment

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

Kollaboration

- Hosted, private wiki *(eMail to support@gwdg.de)*

- Own Mailinglists: https://www.gwdg.de/e-mail-collaboration/mailing-lists

- Cooperative work on texts: pad.gwdg.de

- Sharing documents: owncloud.gwdg.de / cryptshare

- Online work on Office documents: owncloud.gwdg.de

- Live cooperative work on LaTeX-Documents: sharelatex.gwdg.de

- Internetchats (like ICQ): jabber.gwdg.de

- Web- / Team-Chats (like Slack): chat.gwdg.de

- Software development / Project management: gitlab.gwdg.de

Project management

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

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.

DFG Collaborative Research Center 1002

GWDG

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

Lab Notebook Registry
Research Data Archive
Electronic Lab Notebook
Echocardiography Data
Published Data Registry
ALM Data
Mouse Line Catalogue
NGS Data
Antibody Catalogue
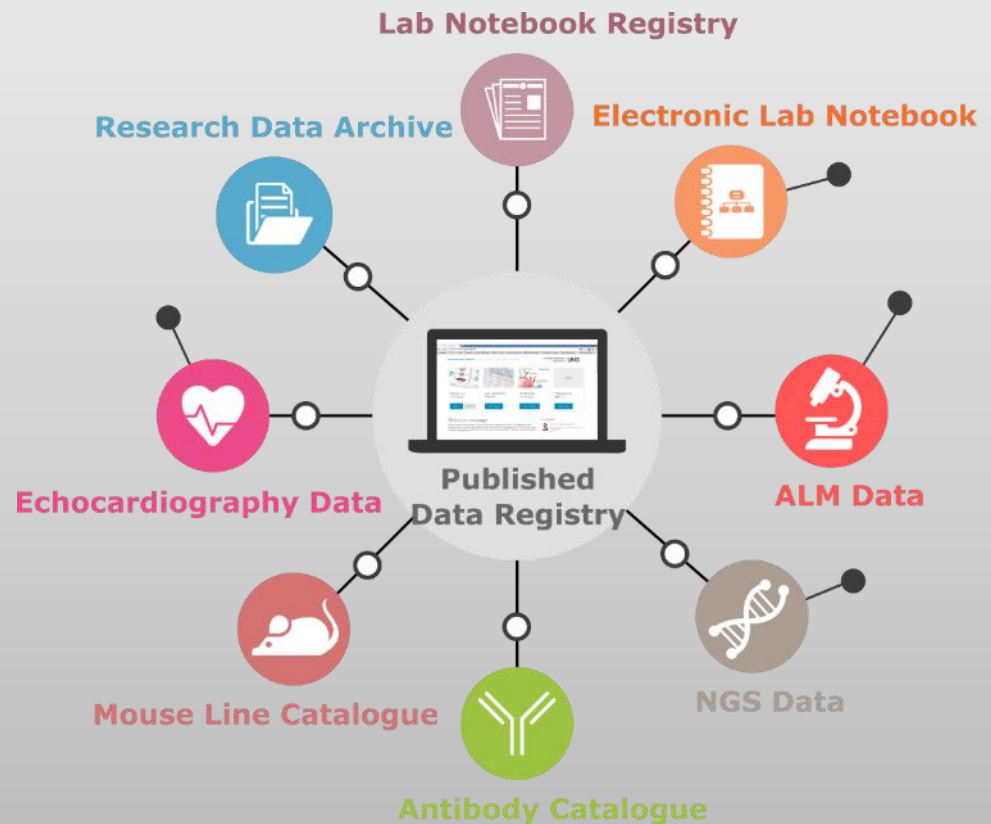
Your personal contact with us

+49 551 201 1523
Contact our hotline

support@gwdg.de
Send us an email and we will contact you soon

support.gwdg.de
Check your tickets
(Account required)

www.gwdg.de/docs

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

- 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:

- 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. 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" 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")

- Data and IT security: Frank Dickmann (fdickmann@med.uni-goettingen.de)

- Technologie- und Methodenplattform für die vernetzte medizinische Forschung e.V. (TMF) 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

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

Dr. Marie Hedderich

Central and Scientific Core Facilities

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/

- 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

Hinweis

Richtwerte für die Beantragung und Abrechnung von

Mitteln für Versuchstiere

guide values for basic animal husbandry:
- 0,75 € per mouse/week
- 1,50 € per rat/week

separate application for animal purchase

Guidelines

for Instrumentation Usage Costs and Core Facilities

- 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
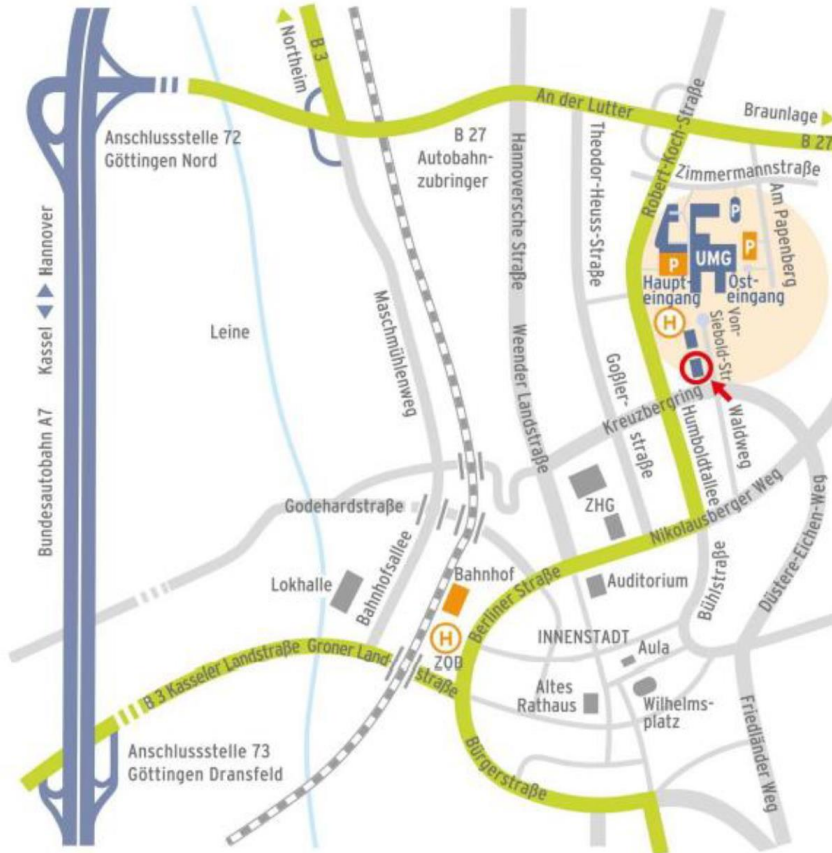
Research Management

Von-Siebold-Str. 3, 37075 Göttingen

forschung@med.uni-goettingen.de

6. Services at the Department of Medical Informatics

Dr. Harald Kusch

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
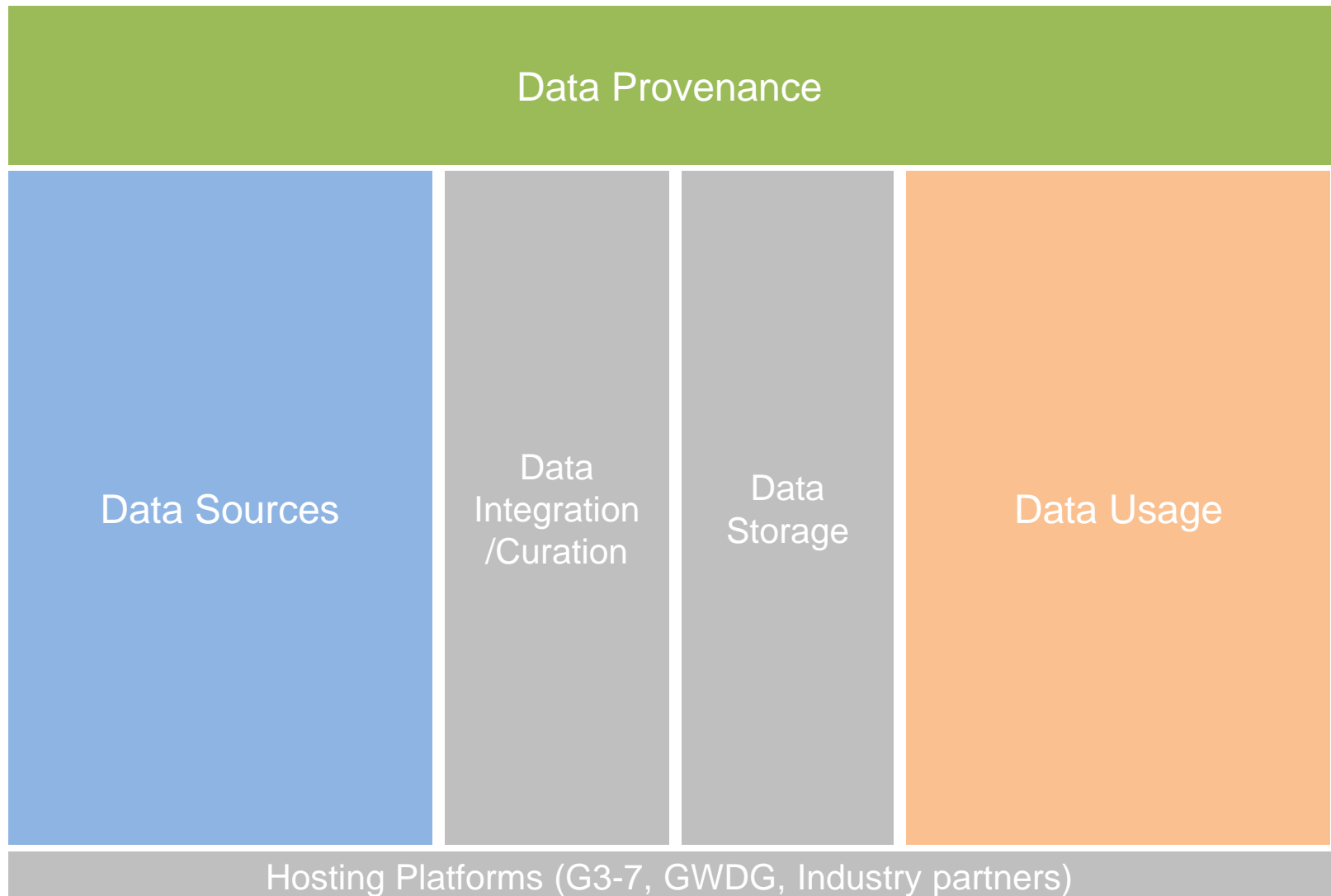
Example services

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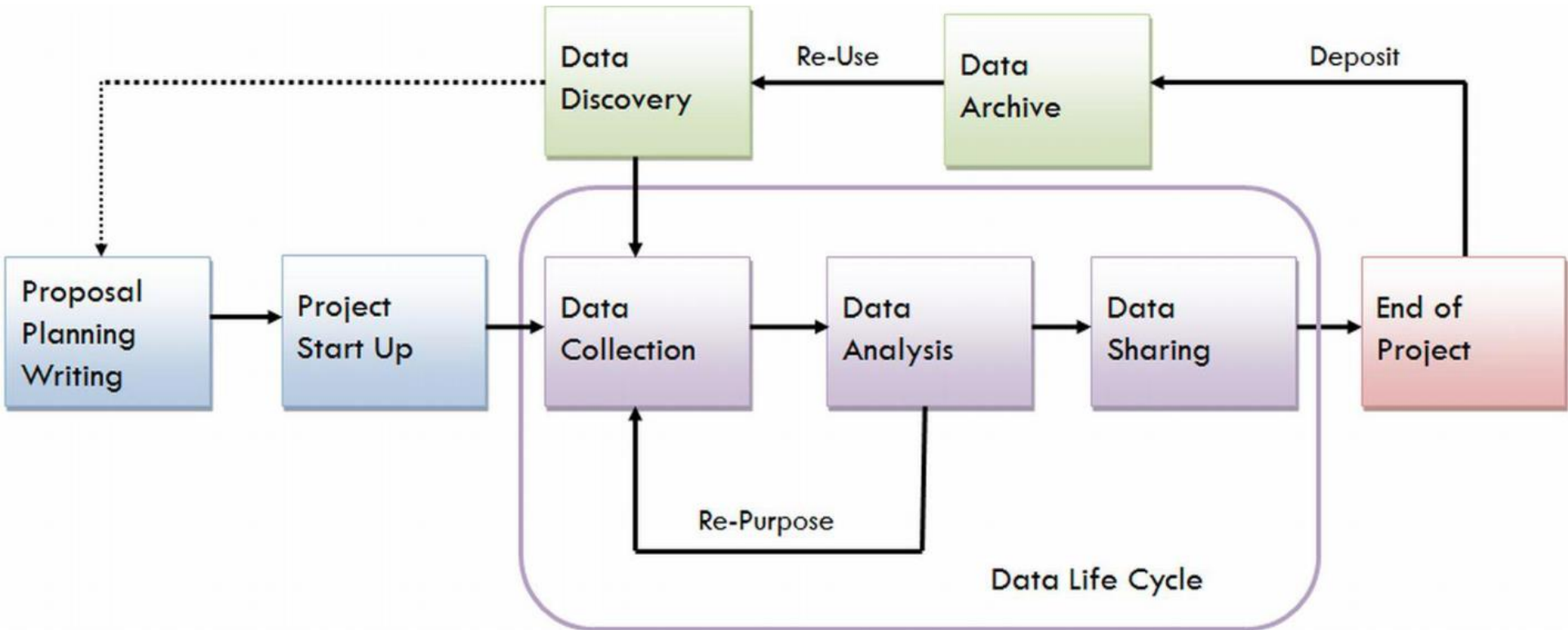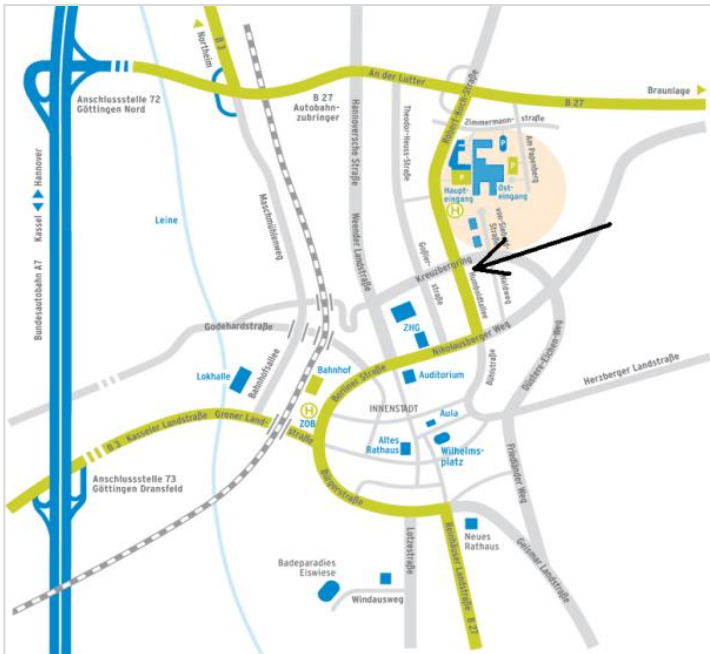
Courtesy of University of Virginia Library https://data.library.virginia.edu/files/Research-Life-Cycle-LG
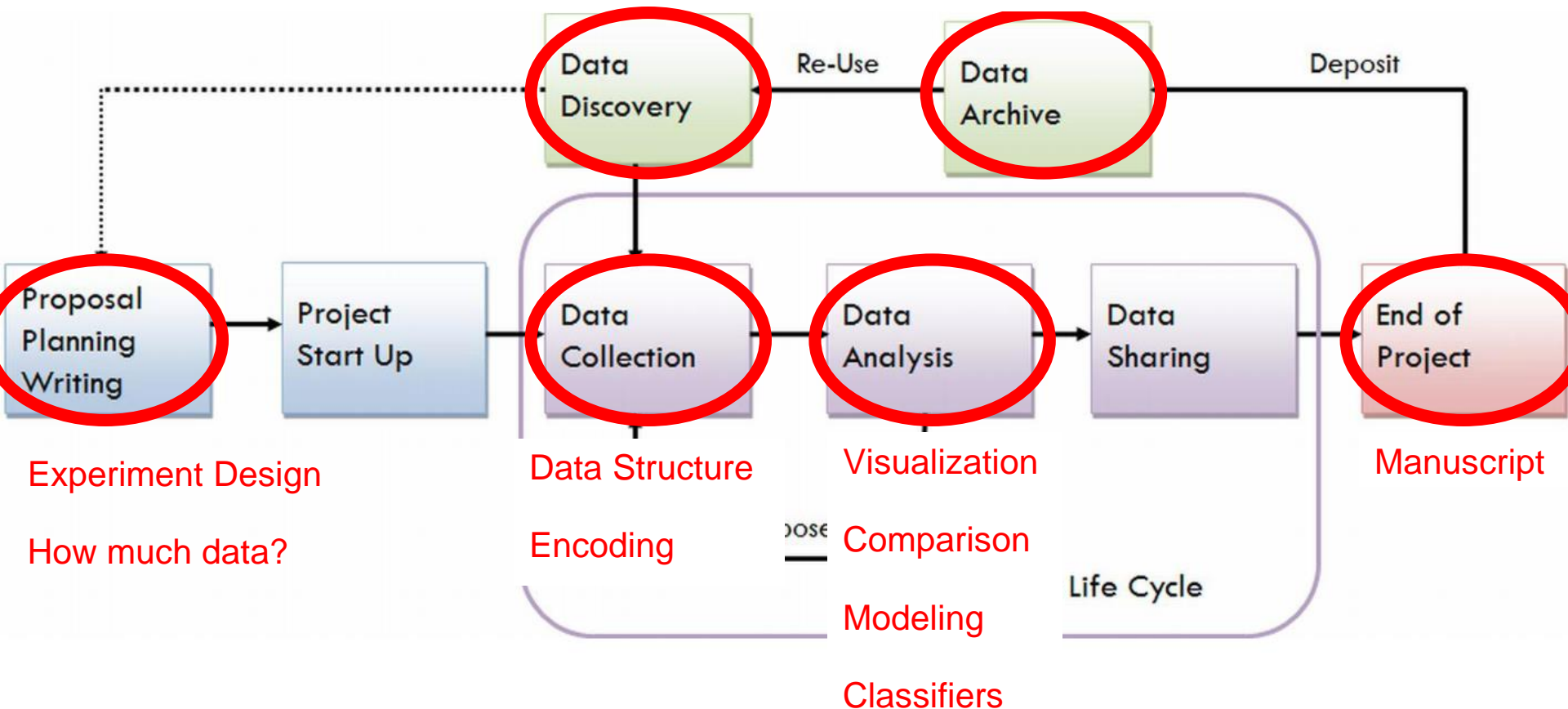
MetaAnalyses

Public Repositories (e.g. TCGA)

GRO.data
Zenodo+github
GEO / SRA
PRIDE

SCIENTIFIC CORE FACILITY
MEDICAL BIOMETRY AND
STATISTICAL BIOINFORMATICS

ΣΙΤÄTSMEDIZIN :UMG
GÖTTINGEN

Re-Use — Data Discovery — Data Archive — Deposit

Proposal Planning Writing → Project Start Up → Data Collection → Data Analysis → Data Sharing → End of Project

Life Cycle

Experiment Design

How much data?

Data Structure

Encoding

Visualization

Comparison

Modeling

Classifiers

…

Manuscript

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

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 / 39-64829 **Phone**

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**
  hybrid at the Department of Medical Statistics, Humboldtallee 32
  as well as online via video conference

▸ Can be visited without prior appointment

▸ medstat.umg.eu/forschung/wissenschaftliche-serviceeinheit/statistische-beratung

Core Facility

Medical Biometry and Statistical Bioinformatics

Coached working

current team of student assistants

▸ Assistance with statistics-

and bioinformatics-software

▸ Location:

    ▸ CIP-pool of the Department of Medical Statistics

    ▸ Learning Ressource Center (Medical Library)

    ▸ Or online via video conference

▸ No prior appointment necessary (for in presence sessions)

▸ Time schedule available at website

medstat.umg.eu/forschung/wissenschaftliche-serviceeinheit/betreutes-arbeiten/

Core Facility
Medical Biometry and Statistical Bioinformatics

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 Zugansdaten 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).**
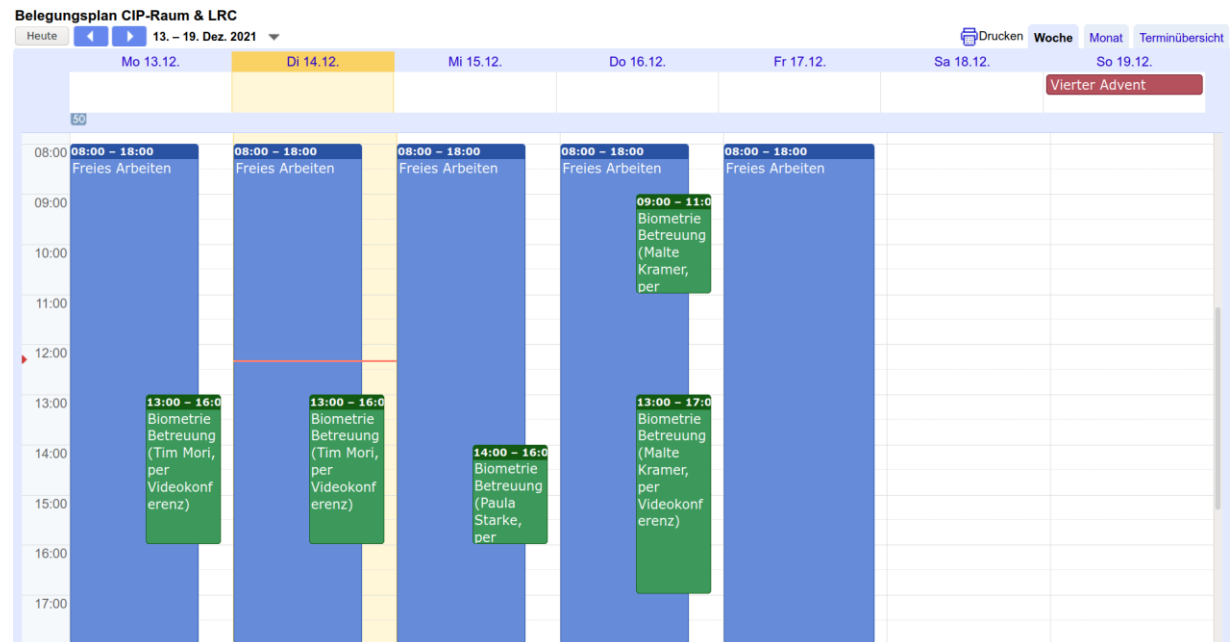
Core Facility

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
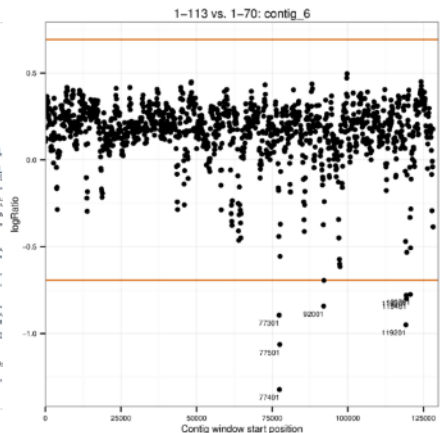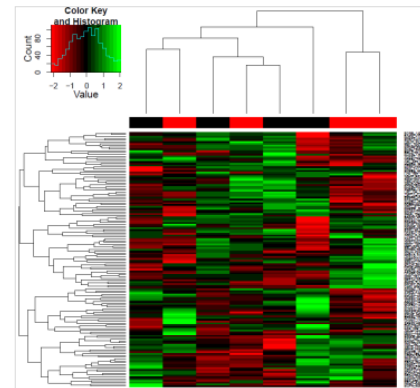
Core Facility

Medical Biometry and Statistical Bioinformatics

Project-related support

▸ We recommend early involvment (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
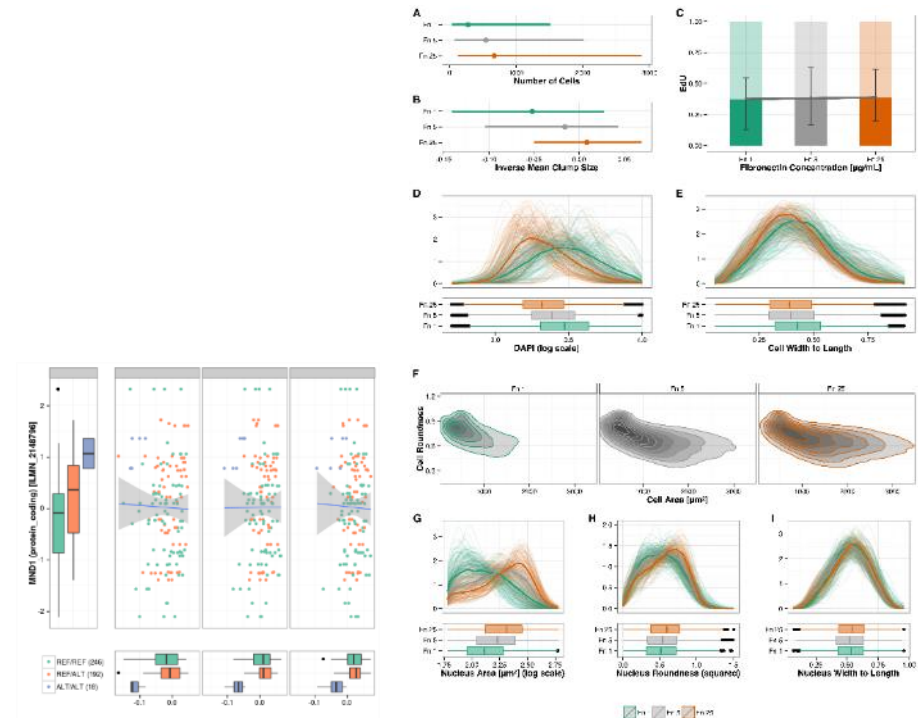
Core Facility

Medical Biometry and Statistical Bioinformatics

Contact

University Medical Center Göttingen
Department of Medical Statistics

37099 Göttingen **Mailing Address**
Humboldtallee 32, 37073 Göttingen **Address**
0551 / 39-64829 **Phone**

service.biometry.bioinformatics@med.uni-goettingen.de **E-Mail**
medstat.umg.eu/forschung/wissenschaftliche-serviceeinheit/ **Website**

Service Group

Systematic Reviews and Meta-Analyses

Methodological support for:
- Systematic reviews and meta-analyses
- Evidence reports for clinical practice guidelines
- Other types of evidence synthesises (e.g. Rapid-Reviews)

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=KHCYHL7A83

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)
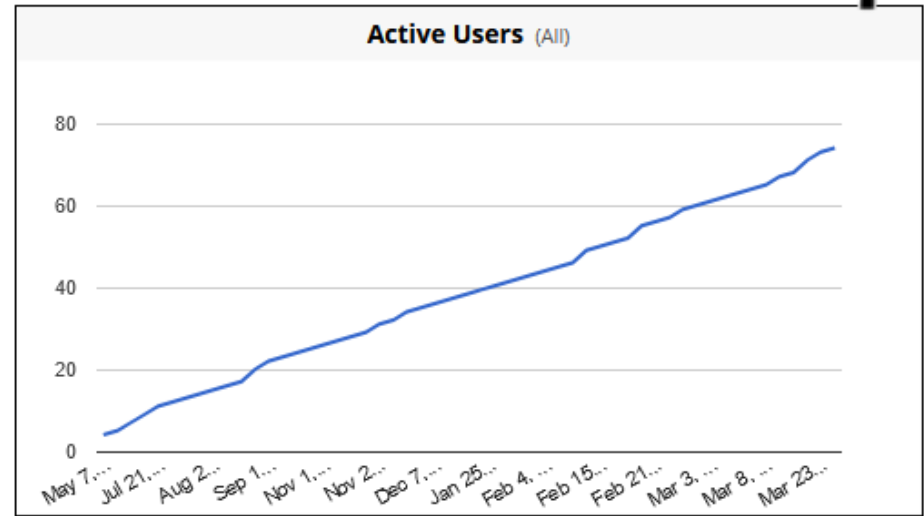
8. Services of the Central Biobank UMG

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 all researchers 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_2

  - at room temperature (FFPE and slides)

- Retrieval of selected biospecimen

- Cooled transport and shipping

- Founding member of the biobank excellence network

Central Biobank UMG

UBFT

Alliance Partner

German Biobank Node
bbmri.de
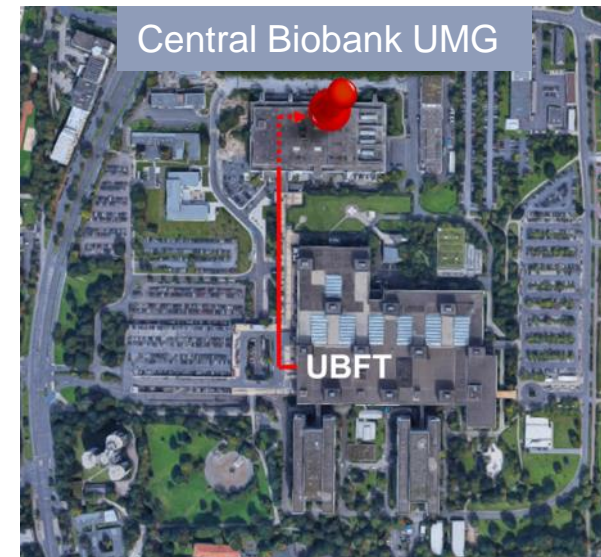
Services

Services for biosamples and data
e.g. aliquoting, PBMC isolation,
data quality control, IATA-compliant
shipping, establishment of methods for
for the cryopreservation of
biosamples, etc.

Provision of
e.g. centrifuges, safety bench,
scanners for storage tubes and racks,
containers for the refrigerated
transport of samples, test environ-
ments (LN$_2$ /-80°C) incl. experienced
personnel for tests

Process support
e.g. pre-packing of vessels for sample
collection and storage for multicentre
studies; ordering, administration and
storage of storage vessels; reception,
quality control and registration
of biosamples

Expertise
e.g. counselling regarding various
biobank aspects, procurement of
co-operation partners and
biosamples, training and
further training

Infrastructure

- Sufficient structured storage capacity

- Backup-systems and equipment

    - High reliability of storage by redundancies in cooling and use of LN_2 vessels and back-up

    - Two independent temperature monitoring systems (24/7)

- Clearly identifyable 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

Lagerroboter von außen

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

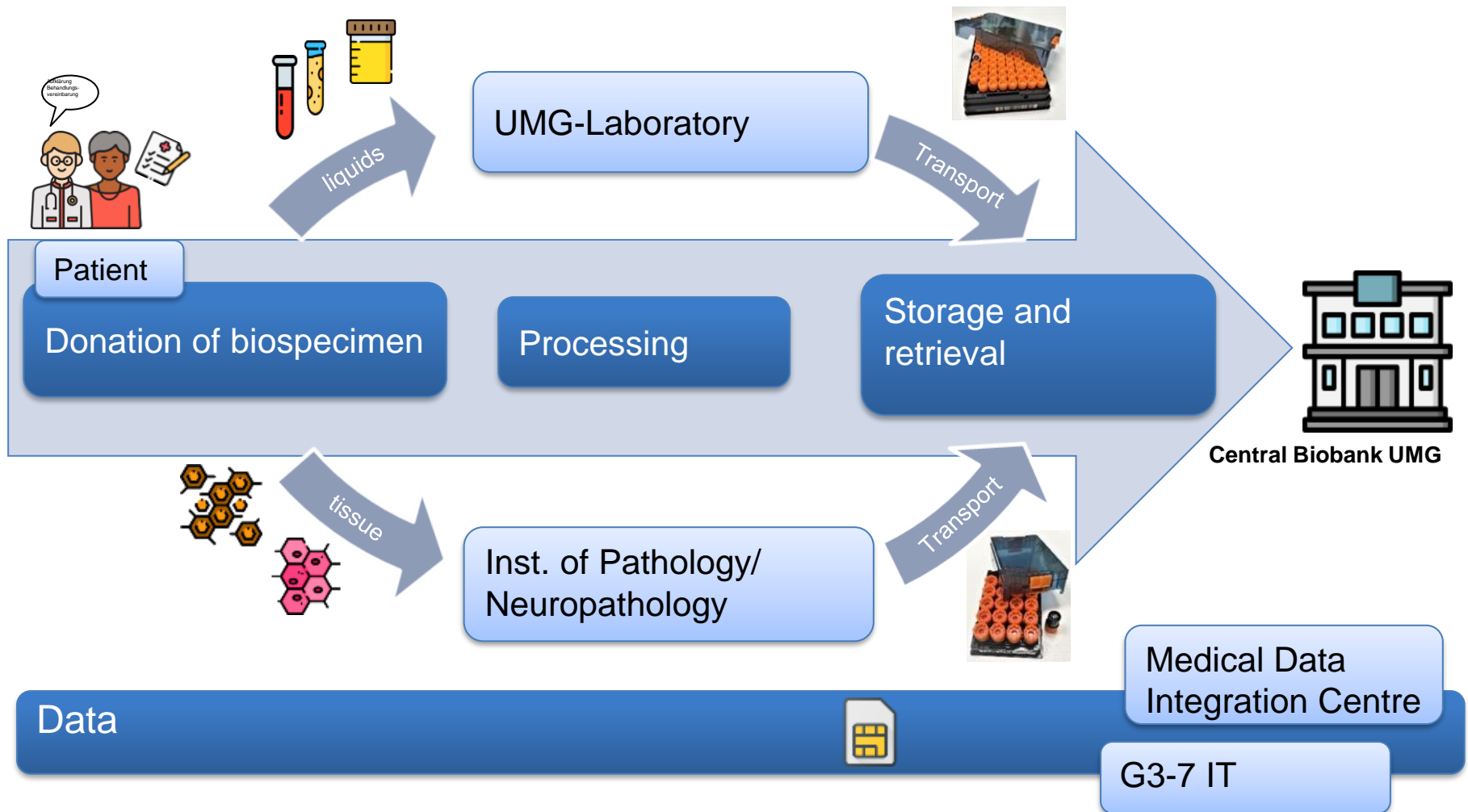Transportwagen CryoCart

Equipment of the Central Biobank UMG

Transportgefäß CryoPod

Equipment of the Central Biobank UMG

Kryowerkbank

ASKION

Processes of UMG Collection

Central Biobank UMG, PD Dr. Sara Nußbeck, February 28th, 2024 © UMG

Have we aroused your interest?

- Contact us for your personal consultation:

  - biobank@med.uni-goettingen.de

  - Or visit our website: https://biobank.umg.eu

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Thanks for your attention!
Are there further questions?

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info@eresearch.uni-goettingen.de