Göttingen/eResearch Alliance

UNIVERSITÄTSMEDIZIN GÖTTINGEN : UMG

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

Judith Friedrich
Ethikkommission, UMG

Marie Hedderich
Referat Forschung, UMG

Harald Kusch
Medizinische Informatik, UMG

Thomas Langbein
Datenschutzbeauftragter, UMG

Andreas Leha
Med. Biometrie und Statistische Bioinformatik, UMG

Sara Nußbeck
Biobank, UMG

Philipp Wieder
Göttingen eResearch Alliance
eScience Gruppe, GWDG

An information event regarding the topic eResearch at UMG, 25.06.2018

Agenda

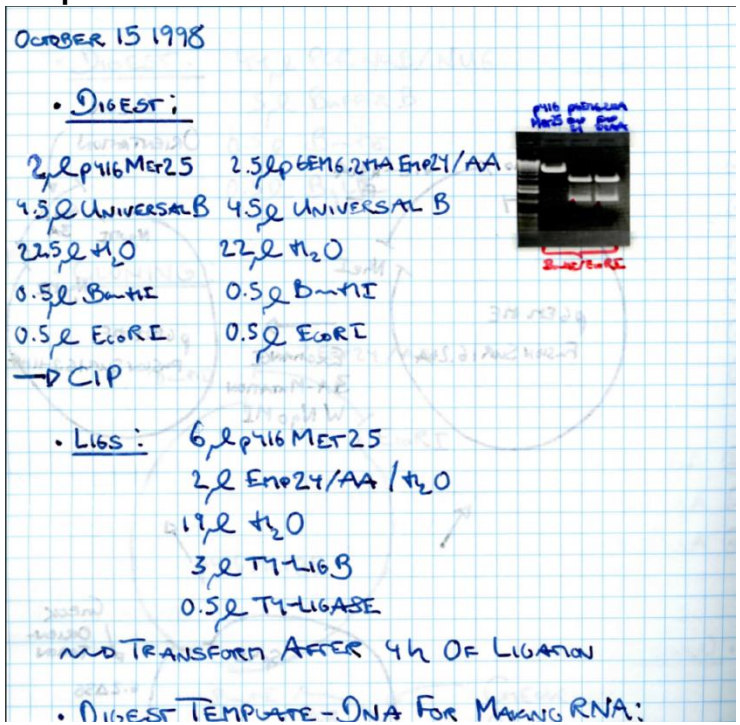
1. Management of research data
2. The Göttingen eResearch Alliance
   2.1. Computing-Services (GWDG)
3. Core facilities at the UMG
4. Ethikkommission at the UMG
5. Data protection officer at the UMG
6. Advisory services at the Department of Medical Informatics
7. Services at the Institute for Medical Statistics
8. Services of the central UMG Biobank

Example: CRC 1002

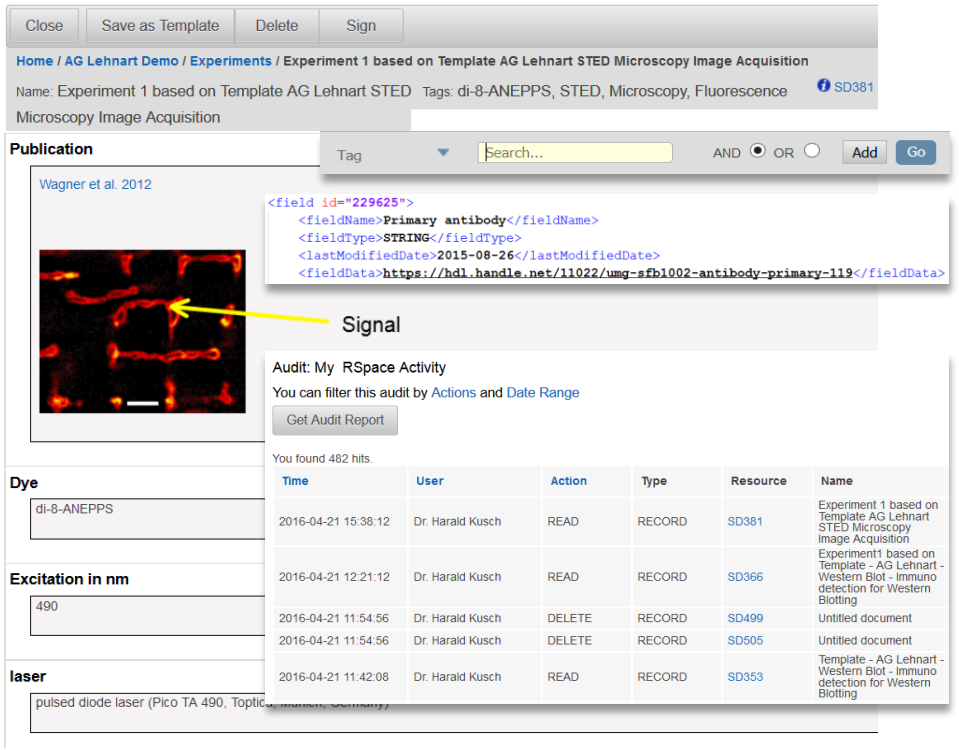
Electronic laboratory notekeeping

SFB 1002

Paper lab notebook



Electronic lab notebook (ELN)

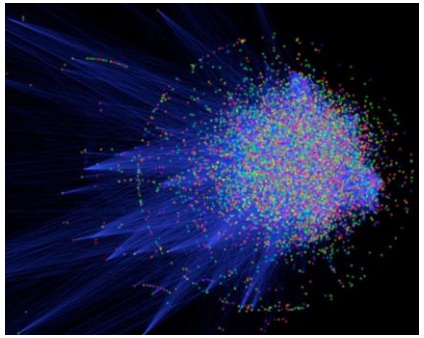


1. Management of Research Data

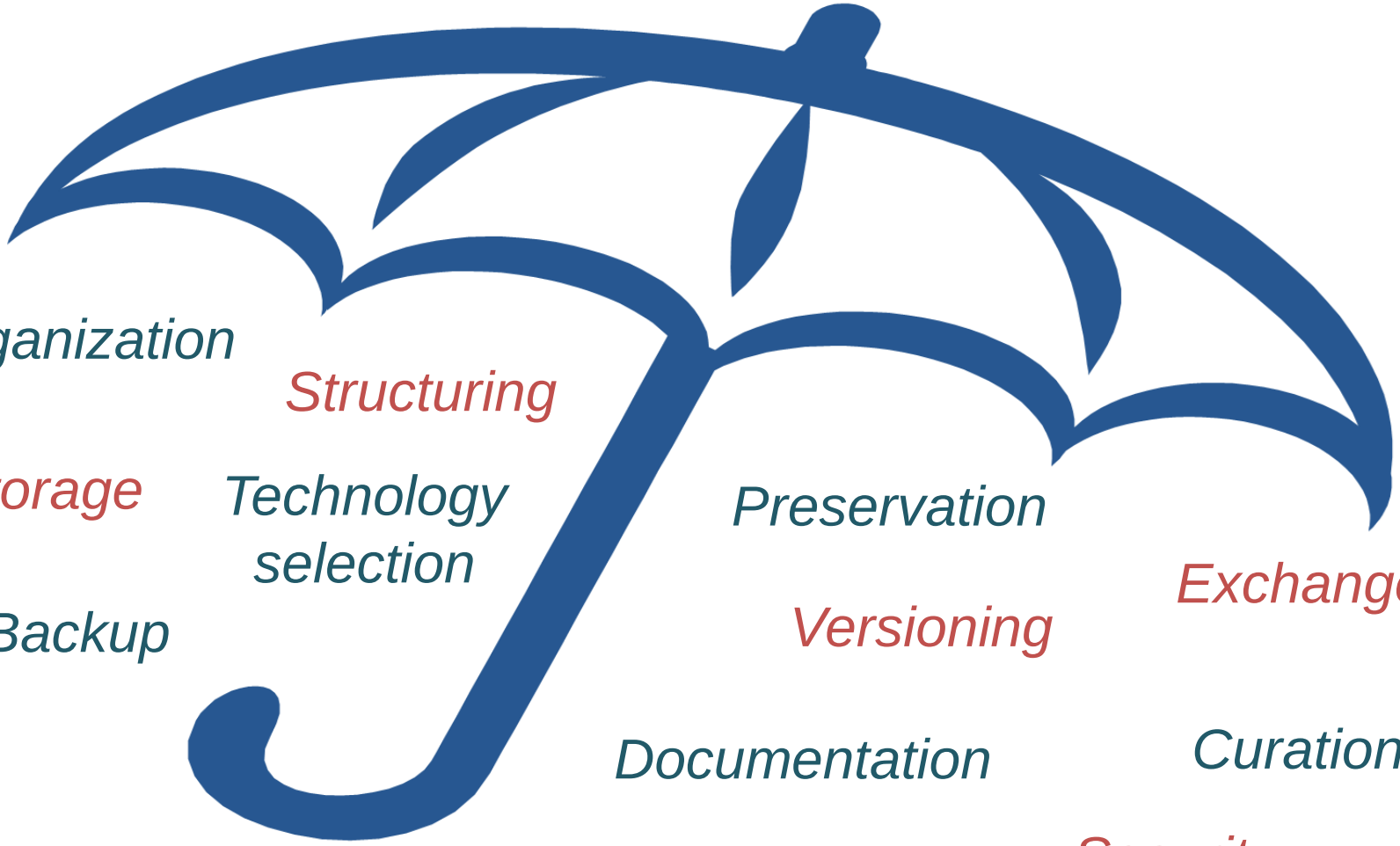
Dr. Harald Kusch

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?



Adapted from “Research data management – a very brief introduction”, the Research Support team, IT Services, University of Oxford

Basic questions I

Organization and storage

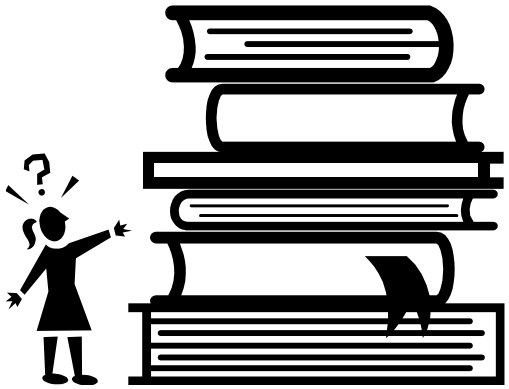
- Do you find what you need when you need it?
- Are your data stored safely? Have you implemented a backup plan?

Adapted from “Research data management – a very brief introduction”, the Research Support team, IT Services, University of Oxford

Basic questions II

Documentation

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



Adapted from “Research data management – a very brief introduction”,
the Research Support team, IT Services, University of Oxford

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?

Adapted from "Research data management – a very brief introduction",
the Research Support team, IT Services, University of Oxford

Göttingen University data policy

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

Preamble:

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

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

https://www.uni-goettingen.de/en/488918.html

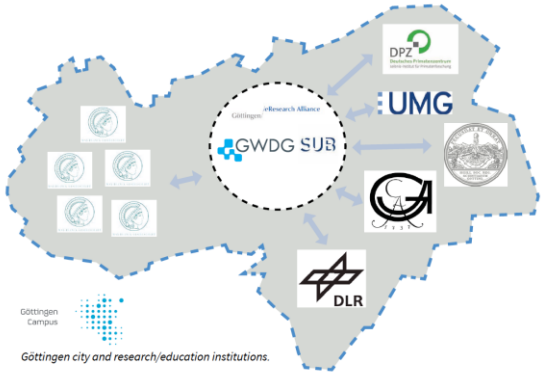
*e*Research = *enhanced*Research

2. Göttingen eResearch Alliance

Dr. Philipp Wieder

eResearch Alliance

- Run **jointly** by Library and IT
  - GWDG: ~120 people, 30 in eResearch
  - SUB: ~450 people, 40 in eResearch
- Close **cooperation** w/
  - Department of Medical Informatics
  - Research Department
- **Brokering-Office** with c. 7 people
  - Team from different disciplines w/ eResearch expertise
  - Actual services and projects in individual organisations
  - Network w/ eResearch experts across the campus
  - Translate discipline-specific into information- infrastructure requirements



eRA Services

Consulting

- Data management requirements
- Data integration
- Data policies
- Legal aspects
- Expert network
- Workshops
- …

Training

- Data management
- eResearch topics
- Digital literacy
- Expert network
- Network on Open Science
- …

Digital Services

- Storage
- Compute
- Communication
- Cooperation
- Project participation
- Foster reuse of solutions
- Sustain solutions
- Devel new digital services
- …

Open Science Göttingen

- Campus wide network on promoting Open Science
- Göttingen Open Science MeetUp (19. September on “of Open Science in other countries/institutions”), http://etherpad.gwdg.de/p/OpenScienceGoe
  - Open Science principles
  - Teaching
  - Data science
- “HackyHour”: Meet, discuss, experiment together with experts on a given topic https://hackyhour.github.io/Goettingen/

www.eresearch.uni-goettingen.de

Göttingen/eResearch Alliance

Search here

Data Management | Tools & Services | eResearch | FAQ | News | Blog | About

Research Life Cycle

Explore our offers by clicking on the topics below:IdeasProject proposal supportData management planningExpert networkResearchWorkshops & TrainingsICT...

More

The Göttingen *eResearch* Alliance is an initiative of the University of Göttingen to assist all researchers on the Göttingen Campus with *eResearch* related questions and data management issues. As a central point of contact for researchers, research associations and faculties the *eResearch* Alliance represents the University's joint forces of the central infrastructure providers, the Göttingen State and University Library (SUB) and the Computing and IT Competence Centre (GWDG).

Your research project! | Your data! | Our services!

We understand *eResearch* as *enhanced* research, which to us means an optimized usage of **digital technologies and methods for innovative research**. We offer information, personal advice and support for key issues related to digital research through all phases of the research life cycle.

Ideas

- Project proposal support
- Data management planning
- Expert network

more

Research

- Workshops & Trainings
- ICT services
- Visualisation & Exploration
- Data strategy implementation

more

Results

- Persistent Identification
- Data publication
- Long term archiving

more

Guidelines

- Policies on Research Data and Open Access as "Amtliche Mitteilung" (PDF, German only)
- Research data policy of the Georg-August-University Göttingen (incl. UMG) - English version
- Open Access policy of the Georg-August-University Göttingen (incl. UMG) - English version

News

- 10.07. - 21.07.2017: Data Science Summer School
- On campus you can follow us now on RocketChat+
- 04.05.2017: Info event on research data management and research services at UMG
- Job posting: GRAcE - Göttingen Research Data Exploratory - management parameters derived from the Göttingen eResearch Alliance
- 09.04.2017: Start of the Data Science Game 2017

www.eresearch.uni-goettingen.de

GEORG-AUGUST-UNIVERSITÄT GÖTTINGEN

2.2. Computing Services (GWDG)

Dr. Philipp Wieder

GWDG

Philipp Wieder

Vorstellung GWDG
IT-Innovations- & Rechenzentrum

Gesellschaft für wissenschaftliche Datenverarbeitung mbH

- **Gründung 1970 – Träger: Universität Göttingen & Max Planck Gesellschaft**
- **Betrieb von Rechenzentren, Parallelrechnern, Netzwerken, Campus-WLAN**
- **125 Mitarbeiter, > 20.000 WLAN-Geräte/Tag online, Zertifiziert nach ISO 9001**
- **IT-Forschungseinrichtung**
  - Leitung- und Mitarbeit in nationalen und internationalen Forschungsprojekten
  - Forschungsschwerpunkte
    - Datenmanagement & elektronische Forschungsinfrastruktur
    - Virtuelle Forschungsumgebung & Innovative Digitalwerkzeuge
    - Datenanalyse, Visualisierung und Big Data Technologien
    - Cloud Computing
    - Next-Generation Networking

Portfolio
Dienste für die Wissenschaft

NEUIGKEITEN | DIENSTE ✕ | FORSCHUNG & LEHRE | ÜBER UNS | SUPPORT | ANMELDEN | EN DE

Speicherdienste
- Fileservice
- Archivierung
- Backup
- GWDG Cloud Share
- Cryptshare
- GWDG ownCloud
- GWDG Crash Plan PROe

E-Mail & Kollaboration
- E-Mail-Service (MS Exchange 2010)
- Spam- und Virenfilterung
- Mailinglisten
- MS SharePoint
- Managed Services
- Projektmanagement-Service
- Etherpad

Server-Dienste
- Virtuelle Server
- Hosting/Housing von Servern
- Webhosting
- GWDG Cloud Server
- FTP Server

Netzwerkdienste
- Systemüberwachung
- IP-Adress-Management-System
- Kabel- und Trassenmanagement-…
- Einrichtung von eduroam
- Anschluss an das Active Directory
- Benutzerverwaltung mit OpenLDAP
- Client-Management

Anwendungsdienste
- Persistent Identifier (PID)
- High Performance Computing
- Bibliotheksdienst Aleph
- Datenbankdienst Oracle
- Bewerbungs-/Registrierungssyste…
- Bioinformatik-Programme
- Statistik-Programme
- Onlineumfragen
- Plagiatserkennung
- Datenbankdienst MySQL

IT Sicherheit
- Sicherheitstests eines Netzwerkes…
- Public-Key-Infrastruktur (PKI)
- Authentifizierungs/Autorisierungs-I…
- Virenschutz (Sophos-Update-Serv…

Allgemeine Dienste
- Software und Lizenzverwaltung
- Kurse
- Videoconferencing
- Leihrechnerpool
- Identity Management
- Druck- & Scandienste

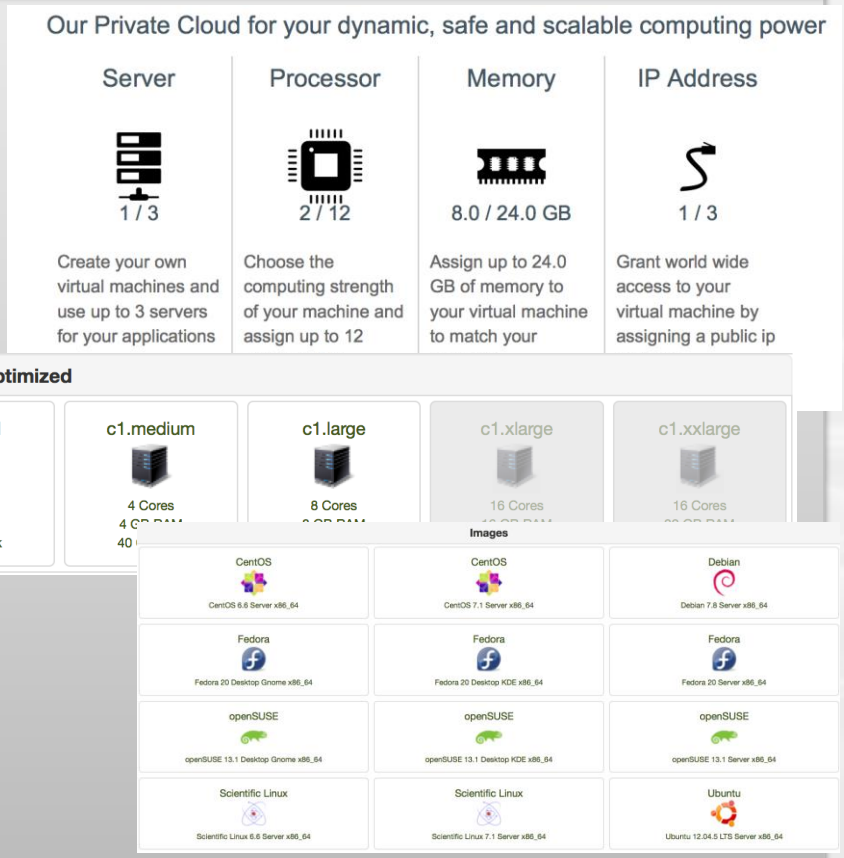
IT-Beratung
- Aufbau von Verzeichnisdiensten (…
- IT-Sicherheit
- Planung von Datenübertragungsn…
- Apple-Beratungszentrum
- Forschungsdaten-Management
- Hardwarekauf

DIENSTE

Beispiel Infrastruktur
GWDG Cloud Server

„Virtuelle“ Rechner für Forschende, Arbeitsgruppen und Projekte

- **Rechner per Selbstbedienung**
- **Für beliebige Anwendungen geeignet**
- **Unterschiedliche Größen bestellbar**
- **Vollständige Kontrolle über den virtuellen Rechner**
- **Eigene IP Adresse**
- **Betrieben in Göttingen**



Beispiel kollaboratives Arbeiten
Eine Auswahl

Kollaboration

- Gehostetes, privates Wiki *(E-Mail an support@gwdg.de)*
- Eigene Mailinglisten: www.gwdg.de
- Texte gemeinsam bearbeiten: etherpad.gwdg.de
- Dokumente Teilen: owncloud.gwdg.de / cryptshare
- Office-Dokumente online bearbeiten: powerfolder.gwdg.de
- LaTeX-Dokumente live gemeinsam bearbeiten: sharelatex.gwdg.de
- Internetchats (wie ICQ): jabber.gwdg.de
- Web- / Team-Chats (wie Slack): chat.gwdg.de
- Softwareentwicklung / Projektmanagement: gitlab.gwdg.de

Beispiel kollaboratives Arbeiten
Projektmanagement

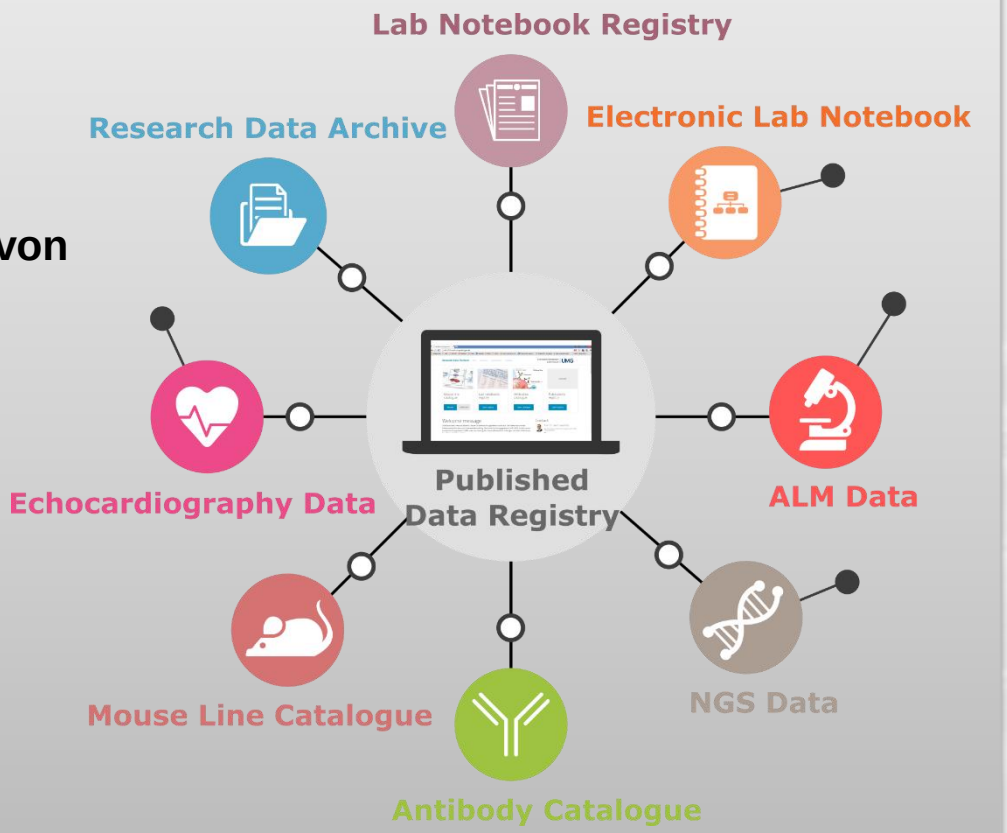
Verwalten von Projekten und Softwareentwicklung

- Webbasiertes Projektmanagement mit einer großen Auswahl an Funktionen die Unterstützung des Projektlebenszyklus
- Features
  - Wiki
  - Verwaltung von Aufgaben
  - Zeitplanung
  - Dokumenten-Repository
  - Nutzermanagement
- Integriertes Git- und SVN-Repository für Softwareentwicklung
- Integration in die eigene Entwicklungsumgebung möglich
- Projektbereiche, in denen Sie eigenständig Projekte erstellen oder verwalten können
- projects.gwdg.de

Projektspezifisches Beispiel
DFG Sonderforschungsbereich 1002

Unterstützung von Forschenden aus verschiedenen Fachdisziplinen

- **Ziele**
  - Nachvollziehbarkeit
  - Übermittlung von Daten an Community-Repositorien
- **Sammlung & Dokumentation von**
  - Publikationen
  - ALM-Daten
  - NGS-Daten
  - Ultraschall-Daten
- **Verknüpfung von**
  - Publikationen
  - Antikörper
  - Laborbüchern
  - Maus-Genom-Linien



Grafik: Bartlomiej Marzec. All icons used are designed by Freepik (www.freepik.com) from www.flaticon.com and licensed under Creative Commons BY 3.0

Ihr persönlicher Kontakt zu uns

+49 551 201-1523

Wenden Sie sich an unsere Hotline

support@gwdg.de

Schreiben Sie uns eine E-Mail und wir nehmen mit Ihnen Kontakt auf

support.gwdg.de

Ein Ticket mit Fragestellung oder Problembeschreibung erstellen
(Konto erforderlich)

www.gwdg.de/docs

www.gwdg.de/faq

Anleitungen & FAQ

Neu hier?

Eine Kurzübersicht häufiger Fragen

Konto beantragen
Passwort ändern
E-Mails abrufen
WLAN (eduroam) nutzen
Virenschutz downloaden
Drucken
Software kaufen
Kursteilnahme

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
Bundesautobahn A7
Kassel
Hannover
Leine
Maschmühlenweg
Weender Landstraße
Goßler-straße
Kreuzbergring
Humboldtallee
Waldweg
Nikolausberger Weg
Zimmermannstraße
Am Papenberg
Haupt-eingang
Ost-eingang
Von-Siebold-Str.
UMG
ZHG
Godehardstraße
Bahnhofsallee
Lokhalle
Bahnhof
ZOB
Berliner Straße
INNENSTADT
Aula
Altes Rathaus
Wilhelms-platz
B 3 Kasseler Landstraße
Groner Landstraße
Anschlussstelle 73
Göttingen Dransfeld

„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 (Übernahmevotum)
  - Retrospective data analysis studies: possibility of a shortened approval process
  - DOK-Applications for PhD-research-projects

(note: Applications must be submitted before starting the study)

Comprehensive consultation:

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

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**

⇒ **<u>Personal</u> <u>data</u> 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/bsvorisprod.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)

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.

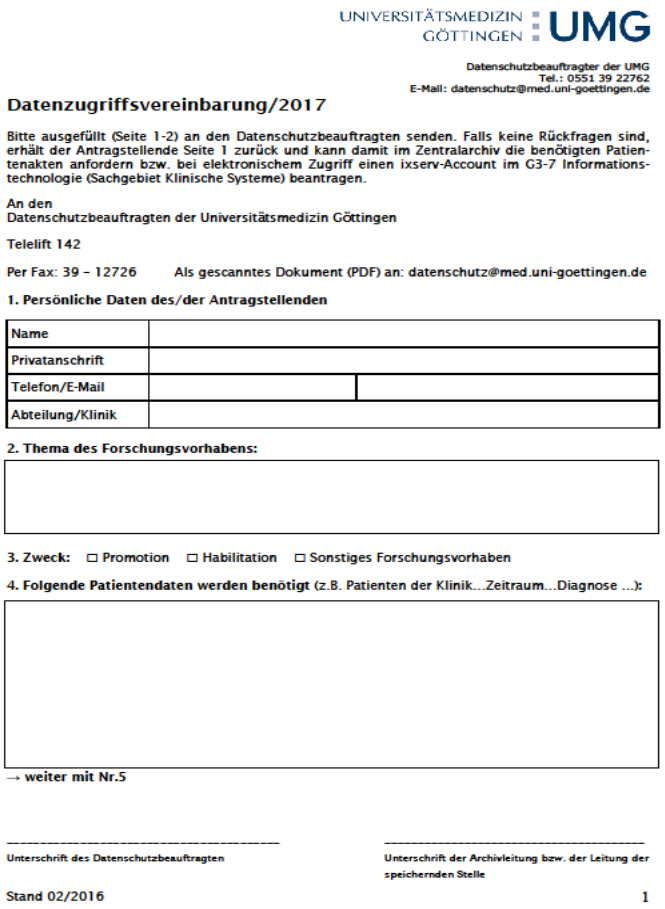
Darüber hinaus legt Art. 32 Abs. 4 DS-GVO fest, dass sowohl Verantwortliche als auch Auftragsverarbeiter Schritte zu unternehmen haben, um sicherzustellen, dass die unterstellten Personen mit Zugang zu personenbezogenen Daten nur auf Anweisung des Verantwortlichen tätig werden. Art. 29 DS-GVO bezieht 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 Da- tengeheimnisses. 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 GÖTTINGEN UMG

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 Informationstechnologie (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:

3. Zweck: ☐ Promotion ☐ Habilitation ☐ Sonstiges Forschungsvorhaben

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

→ **weiter mit Nr.5**

Unterschrift des Datenschutzbeauftragten

Unterschrift der Archivleitung bzw. der Leitung der speichernden Stelle

Stand 02/2016 1

Research and Data Protection

Keep in contact

Dr. Thomas Langbein

David A. Hunt

Tel.: 39-22762

E-Mail: datenschutz@med.uni-goettingen.de

5. Core facilities at UMG

Dr. Marie Hedderich

UNIVERSITÄTSMEDIZIN GÖTTINGEN UMG

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, 39-8296*)
- **Biobank** (*PD Dr. Nußbeck, sara.nussbeck@med.uni-goettingen.de, 39-65701*)
- **Scientific Workshop** (*Mr. Lott, clott@gwdg.de, 39-4119*)

Scientific Core Facilities

- **Transcriptome and Genome Analysis Laboratory (TAL)**
  (*Dr. Salinas, gsalina@gwdg.de, 39-22316*)
- **Proteomics** (*Dr. Lenz, proteomics.ms@med.uni-goettingen.de, 39-65192*)
- **MR-Research** (*PD Dr. Dechent, mrserviceeinheit.sekretariat@med.uni-goettingen.de, 39-13141*)
- **Medical Biometry and Statistical Bioinformatics**
  (*Dr. Leha, andreas.leha@med.uni-goettingen.de, 39-4987*)
- **Cell Sorting** (*Prof. Wulf, cellsorting@med.uni-goettingen.de, 39-12772*)

Central and Scientific Core Facilities

Two new Scientific Core Facilities

- **UMG Medical Data Integration Center (MeDIC) - research data**
- **Research-MR for cardiovascular imaging**

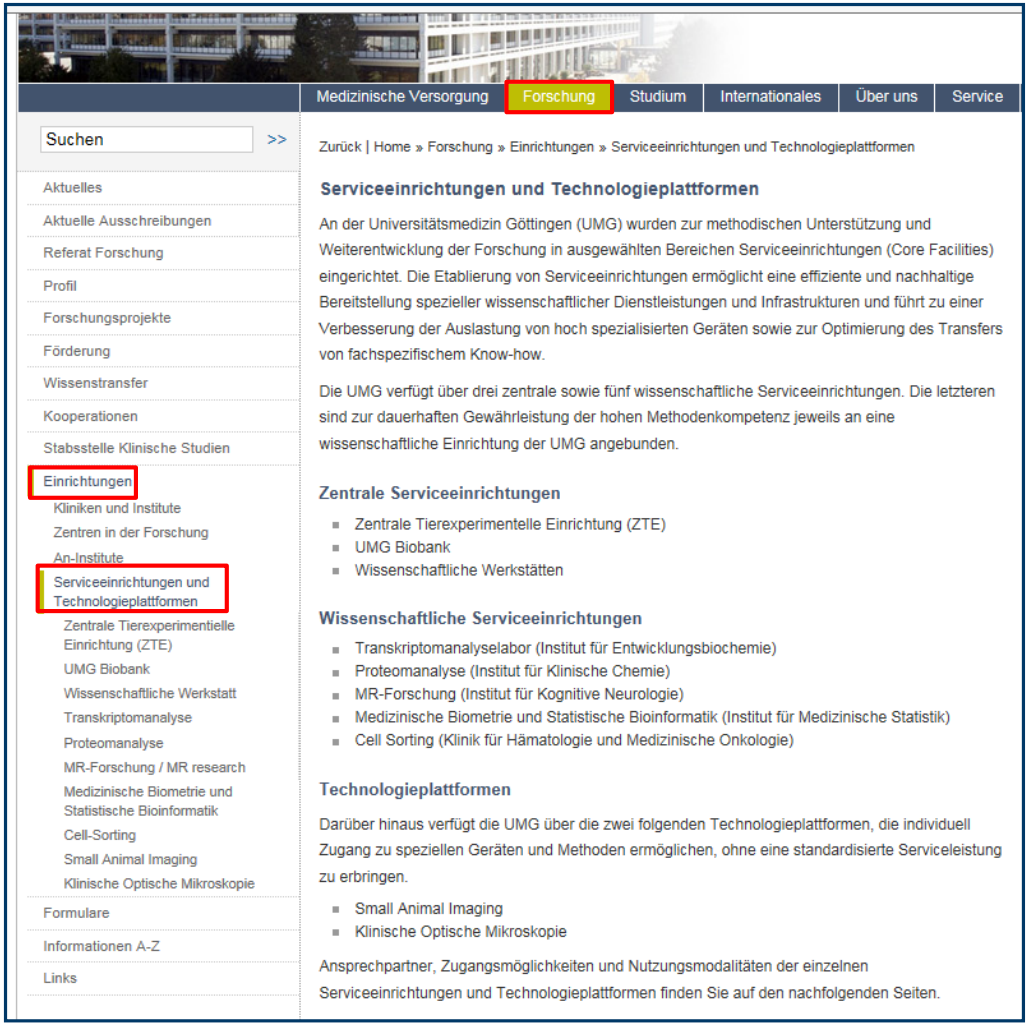
Information event for researchers at the UMG

Come and get to know the contact persons and services!

Expected: *October/November 2018*

Where to find information?

http://www.med.uni-goettingen.de/de/content/forschung/1991.html



- 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 – 03/15 Seite 1 von 1

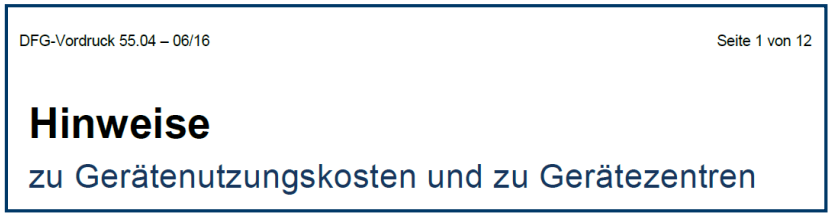
Hinweis

Richtwerte für die Beantragung von Tierkosten

guide values for basic animal husbandry:

- 0,70 € per mouse/week
- 1,40 € per rat/week

separate application for animal purchase



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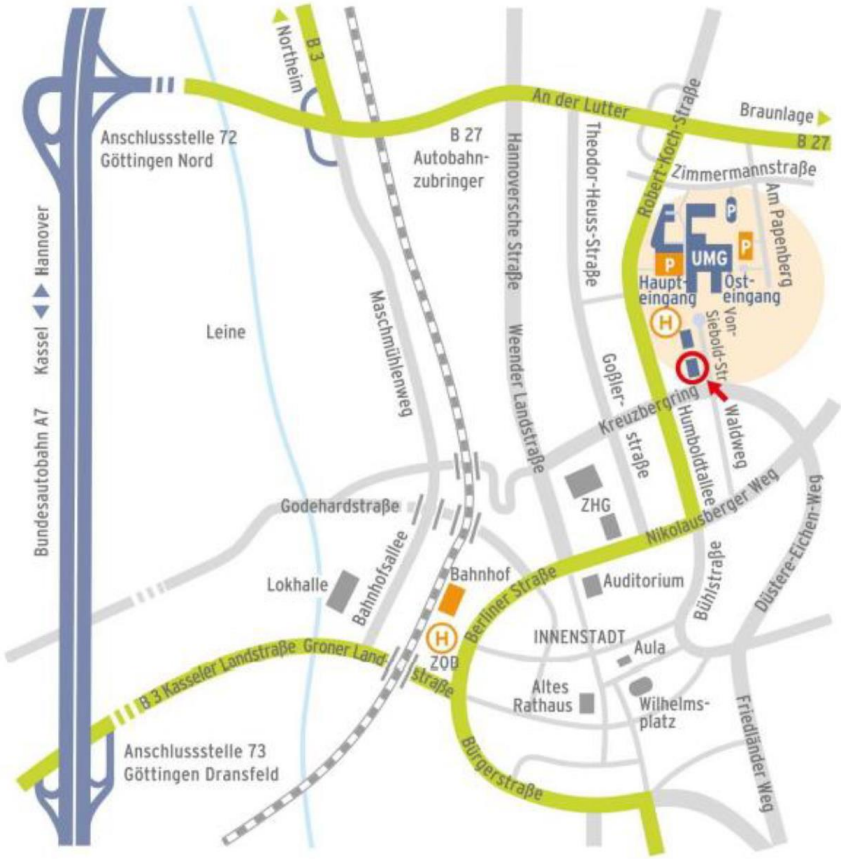
Hinweise

zu Gerätenutzungskosten und zu Gerätezentren

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

It can only be applied for project-specific costs!

Contact Details – Forschung und EU-Büro



Forschung und EU-Büro

Von-Siebold-Str. 3, 37075 Göttingen

forschung@med.uni-goettingen.de

6. Advisory services at the Department of Medical Informatics

Dr. Harald Kusch

mi.med.uni-goettingen.de

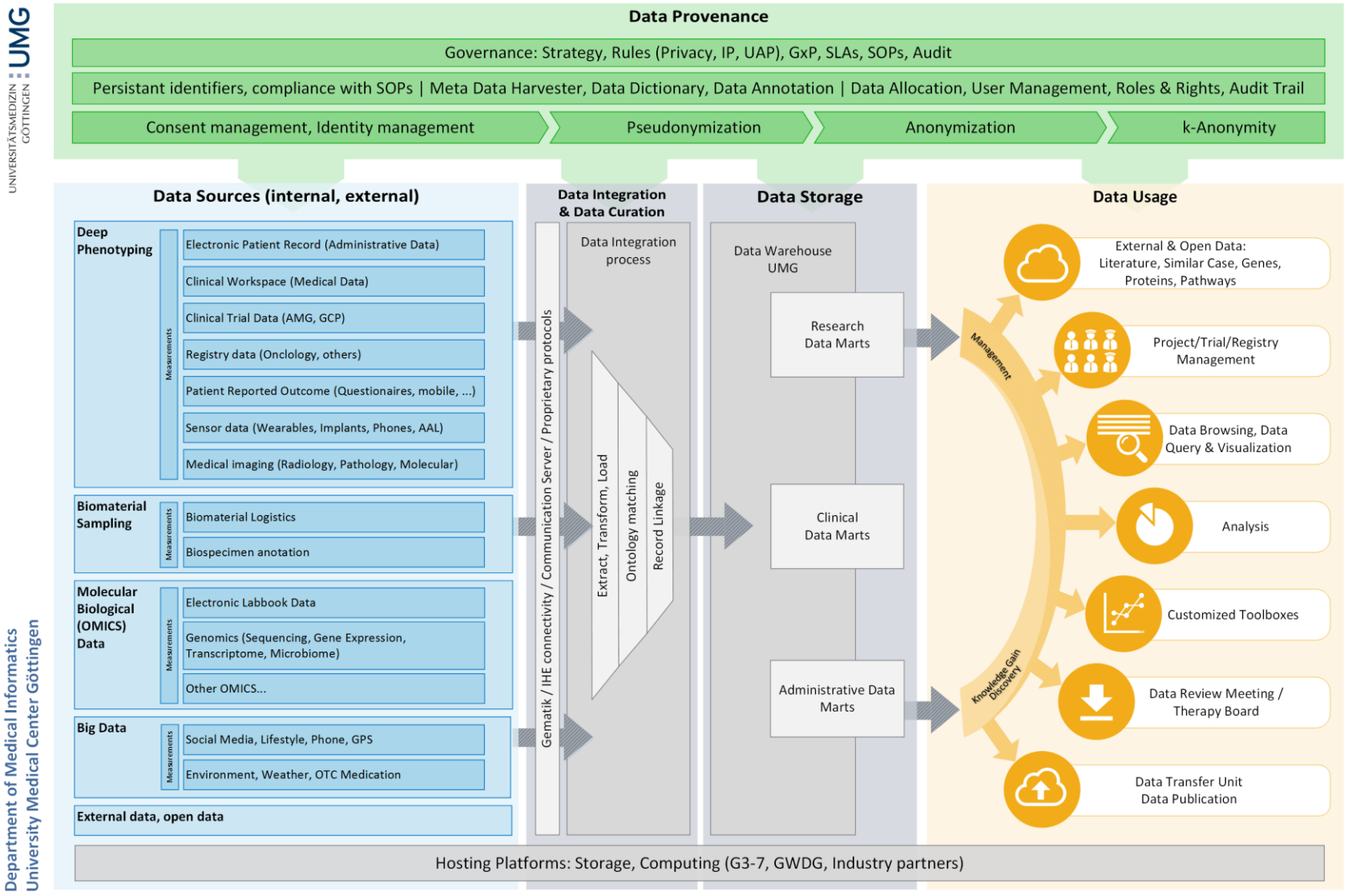
Advisory services at Department of Medical informatics

- Support for design of scientific studies in coordination with Med. Statistics, KSM 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

Göttingen/eResearch Alliance

UNIVERSITÄTSMEDIZIN GÖTTINGEN : UMG

Hard- und software infrastructure



Department of Medical Informatics
University Medical Center Göttingen

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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

Göttingen/eResearch Alliance

UNIVERSITÄTSMEDIZIN GÖTTINGEN UMG

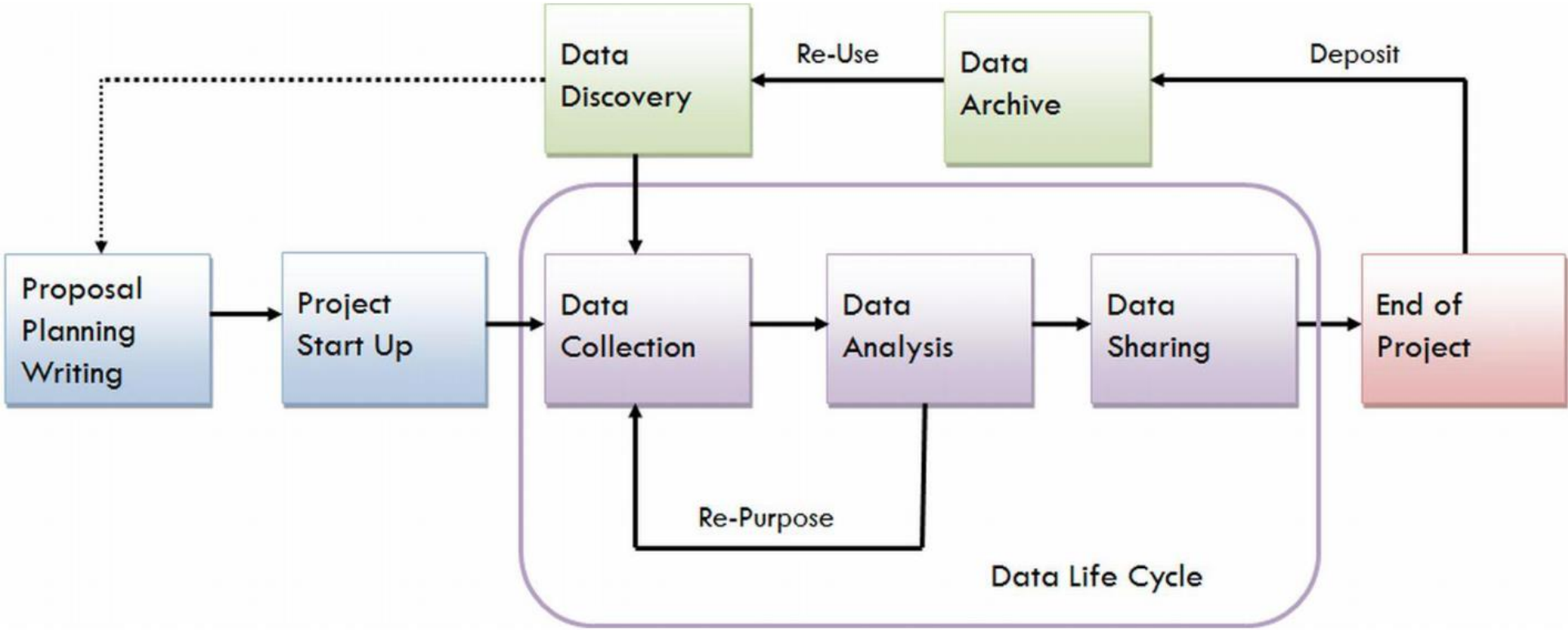
Contact persons at Department of Medical Informatics

Prof. Dr. Otto Rienhoff	Head of Department
Prof. Dr. Ulrich Sax	IT-infrastructures for translational research
Thomas Franke	IT-infrastructures for clinical collaborative research
Sabine Rey	Medizinisches Forschungs-Daten-Integrations-Centrum (UMG-MeDIC)
Stefanie Wache	Intersectoral research
Dr. Harald Kusch	IT infrastructures in biomedical basic research
	Contact to Göttingen eResearch Alliance

mi.med.uni-goettingen.de

7. Services at the Institute for Medical Statistics

Dr. Andreas Leha



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

Core Facility

Medical Biometry and Statistical Bioinformatics

- Infrastructure facility of the UMG
- Located at the department of medical statistics
- Offers assistance in
  - planning and
  - evaluation of

  scientific studies and experiments
- Open to all institutions, groups and PhD students at the UMG
- Additionally open to other institutions from the research campus

UNIVERSITÄTSMEDIZIN GÖTTINGEN UMG

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
- Can be visited without prior appointment

UNIVERSITÄTSMEDIZIN GÖTTINGEN UMG

Core Facility

Medical Biometry and Statistical Bioinformatics + TAL

NGS Consulting Hour

Help with the planning of NGS projects
Plan the data analysis

Tuesday, 10am – 12am
at the UBFT, 0.A2.006
(Bettenhaus 2, seminar room HämaOnko)

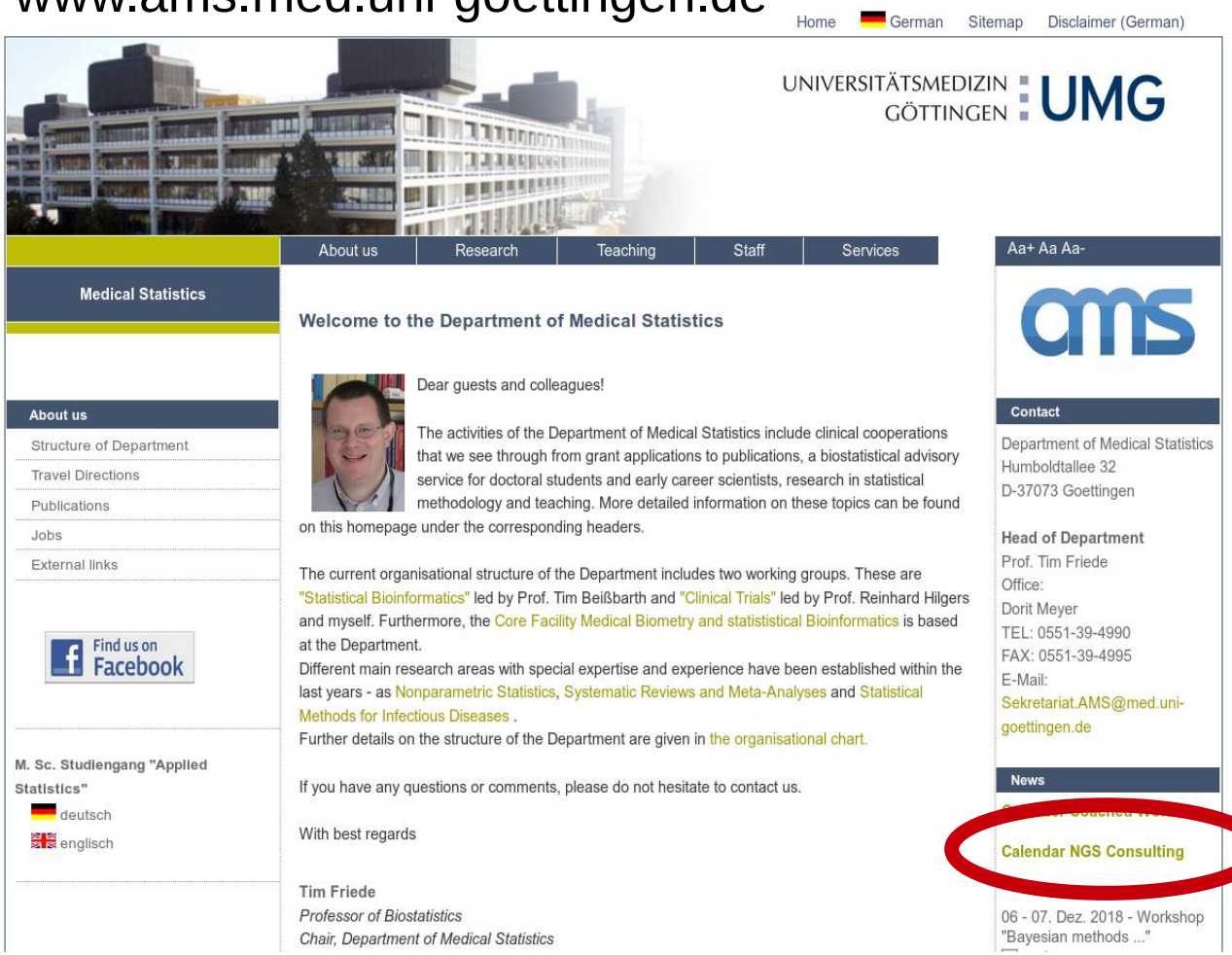
UNIVERSITÄTSMEDIZIN GÖTTINGEN : UMG

Core Facility

Medical Biometry and Statistical Bioinformatics

www.ams.med.uni-goettingen.de

NGS Consulting Hour



UNIVERSITÄTSMEDIZIN GÖTTINGEN UMG

Core Facility

Medical Biometry and Statistical Bioinformatics

NGS Consulting Hour

Current Plan

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)
- No prior appointment necessary
- Time schedule available at the departments website

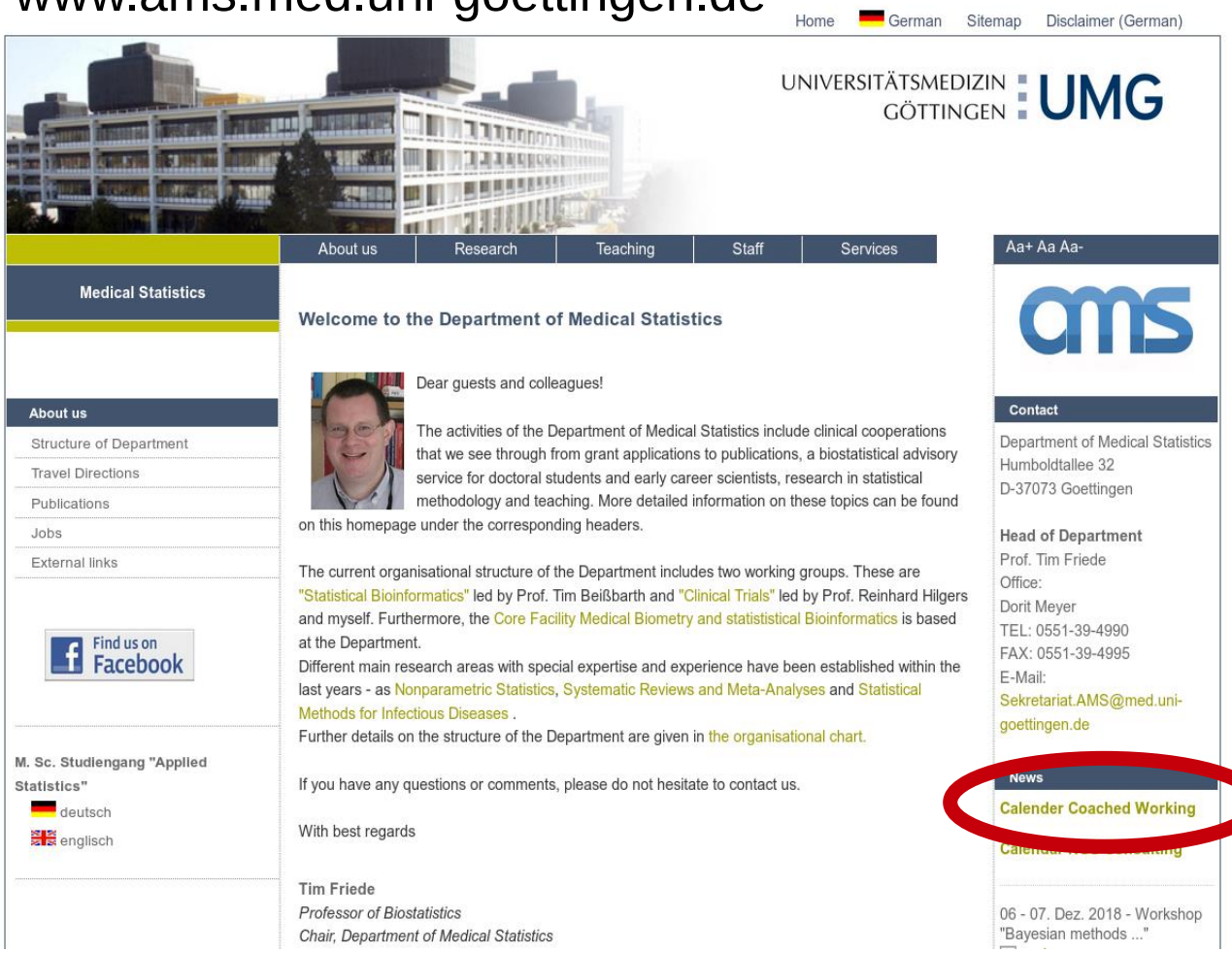
UNIVERSITÄTSMEDIZIN GÖTTINGEN : UMG

Core Facility

Medical Biometry and Statistical Bioinformatics

www.ams.med.uni-goettingen.de

- **Coached working**



Core Facility

Medical Biometry and Statistical Bioinformatics

- **Coached working**

Unser Service „Betreutes Arbeiten" dient der direkten Unterstützung am Computer bei der Auswertung Ihrer medizinischen und experimentellen Daten. Das „Betreute Arbeiten" findet entweder im CIP-Raum des Instituts für Medizinische Statistik oder im LRC in der Bereichsbibliothek Medizin statt (siehe aktueller Plan).

Bearbeiten

Aktueller Belegungsplan

Belegungsplan CIP-Raum folgende Woche & LRC

Drucken

	Mo 23.1.	Di 24.1.	Mi 25.1.	Do 26.1.	Fr 27.1.	Sa 28.1.	So 29.1.
08:00	08:00 - 13:00 Biometrie-Betreuung (CIP-Raum, Maria Stark)	08:00 - 10:15 nicht verfügbar	08:00 - 18:00 Freies Arbeiten	08:00 - 12:30 Freies Arbeiten	08:00 - 09:30 Freies Arbeiten		
09:00					09:30 - 11:30 nicht verfügbar		
10:00		10:15 - 13:15 Biometrie-Betreuung (CIP-Raum, Maria Stark)					
11:00					11:30 - 18:00 Freies Arbeiten		
12:00				12:30 - 14:30 nicht verfügbar			
13:00	13:00 - 18:00 Freies Arbeiten	13:15 - 18:00 Freies Arbeiten					
14:00				14:30 - 18:00 Freies Arbeiten			
15:00							
16:00							
17:00							
18:00							

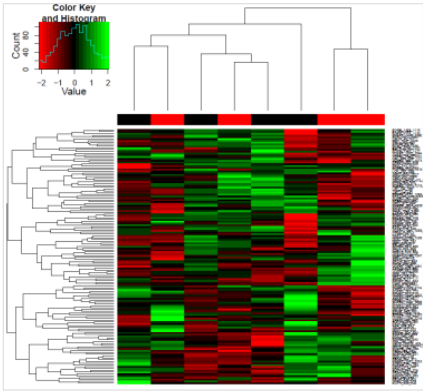
UNIVERSITÄTSMEDIZIN GÖTTINGEN UMG

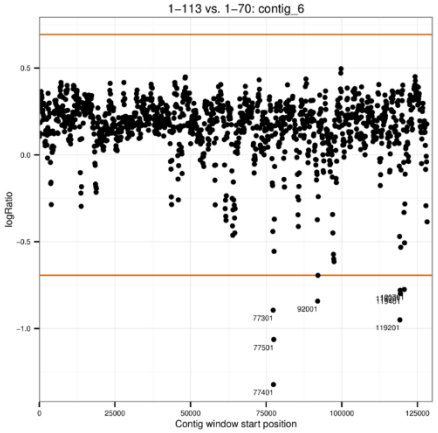
Core Facility

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





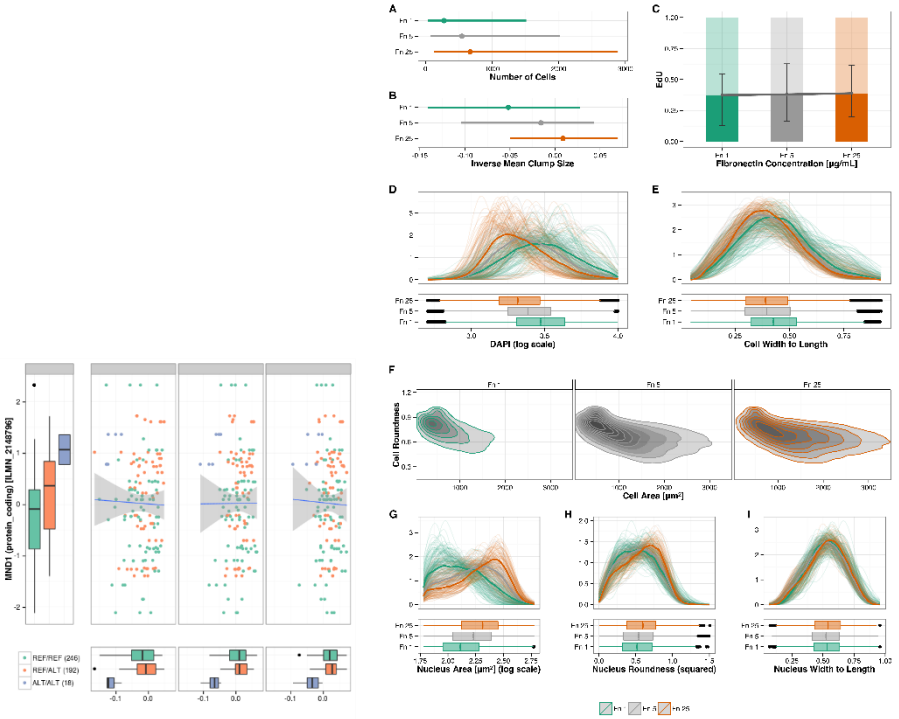
UNIVERSITÄTSMEDIZIN GÖTTINGEN UMG

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

Methods and software courses

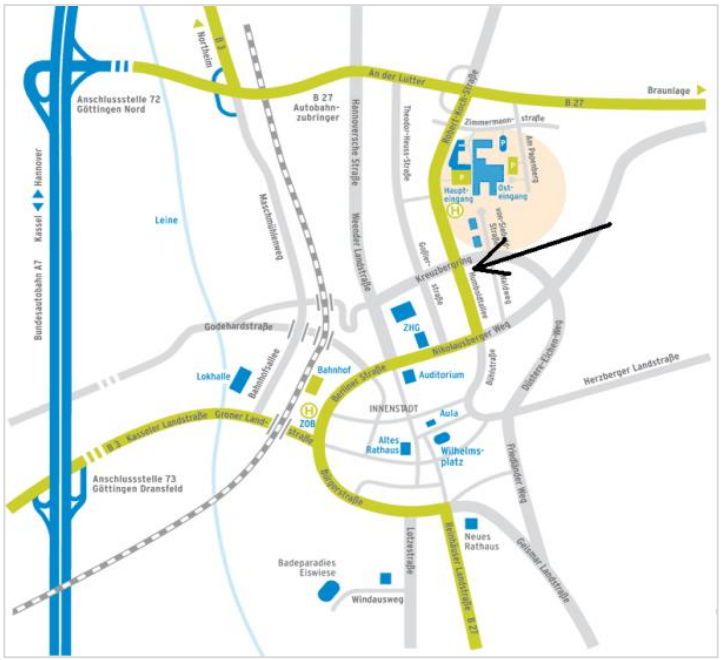
- Special courses in biometry or bioinformatics methods and software
  - Introduction to Biometry
  - Sample Size Planning
  - Statistical tests and correction for multiplicity
  - Analysis of RNAseq Data + *TAL*
  - Graphical Data Representation
- Courses will be announced on the department website

UNIVERSITÄTSMEDIZIN GÖTTINGEN : UMG

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**
www.ams.med.uni-goettingen.de/service-en.shtml **Website**

8. Services of the central UMG Biobank

PD Dr. Sara Nußbeck

UNIVERSITÄTSMEDIZIN GÖTTINGEN : UMG
BIOBANK

/eResearch Alliance Göttingen/

7. Services of the Central Core Facility UMG Biobank

PD Dr. Sara Nußbeck, Head of UMG Biobank

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BIOBANK

/eResearch Alliance Göttingen/

WHAT IS A BIOBANK?

- Centralized core facility at the UMG
- Logistics unit for standardised storage of biomaterials and accompanying data

Automated storage at -80°C

Manual storage in vapor phase of LN_2

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WORKFLOWS OF A BIOBANK

Biomaterial and Data

&

-80°C

Researcher

< -180°C

Aliquots

Storage

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BIOBANK

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AIM

The aim of the UMG Biobank is to support biomedical research by providing high quality data and samples.

Three ways to **get in contact** with the UMG Biobank:

1. Donors / Patients provide biomaterial for research purposes
2. Independent researcher with own research proposal / project*
3. (Researcher in a clinic or department / project collaborating with the UMG Biobank – sample request from collection strategy)

* http://www.biobank.med.uni-goettingen.de/de/content/forscher/226.html

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BIOBANK

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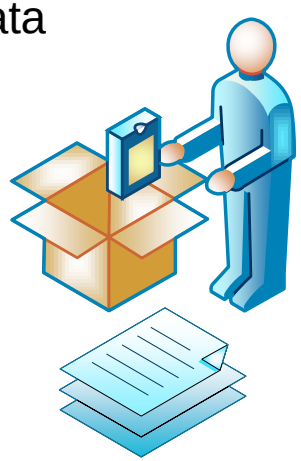
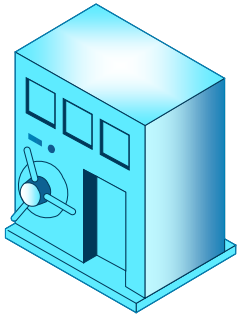
SERVICES

- Advise on sample quality and handling
- Advise on data management
- Sample processing, storage and management
- Provision of samples and data
- ….





UNIVERSITÄTSMEDIZIN GÖTTINGEN : UMG
BIOBANK

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IMPRESSIONS

ethics IT systems and interfaces automation

standardised workflows frame work documents

backup strategies

UNIVERSITÄTSMEDIZIN GÖTTINGEN UMG BIOBANK

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CONTACT DETAILS AND MORE INFORMATION

biobank@med.uni-goettingen.de
www.biobank.med.uni-goettingen.de

Consultation hours: every 1st Thursday of the month (12-2 pm)

Thanks for your attention!

Are there further questions?

http://eresearch.uni-goettingen.de

info@eresearch.uni-goettingen.de