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

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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

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
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 fulfill 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
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/
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

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

**Results**
- Persistent Identification
- Data publication
- Long term archiving

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**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: GRAeE - Göttingen Research Data Exploratory - management parameters derived from the Göttingen eResearch Alliance
- 09.04.2017: Start of the Data Science Game 2017

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www.eresearch.uni-goettingen.de
2.2. Computing Services (GWDG)

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

GWDG CLOUD SERVER

Philipp Wieder
Vorstellung GWDG
IT-Innovations- & Rechenzentrum

Gesellschaft für wissenschaftliche Datenverarbeitung mbH

- 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

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

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

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

Sicherheit
- Sicherheitstests eines Netzwerkes
- Public-Key-Infrastruktur (PKI)
- Authentifizierungs/Autorisierungs-Steuerung
- Viren-schutz (Sophos-Update-Serv

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

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

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

IT-Beratung
- Aufbau von Verzeichnisdiensten ...
- IT-Sicherheit
- Planung von Datentransferung...
- Apple-Beratungszentrum
- Forschungsdaten-Management
- Hardwarekauf
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
Example of collaborative work
A selection

- Hosted, private Wiki (*E-Mail an support@gwdg.de*)
- Own mailing lists: [www.gwdg.de](http://www.gwdg.de)
- Texts to edit together: [etherpad.gwdg.de](http://etherpad.gwdg.de)
- Share documents: [owncloud.gwdg.de](http://owncloud.gwdg.de) / cryptshare
- Office documents online editing: [powerfolder.gwdg.de](http://powerfolder.gwdg.de)
- LaTeX documents live editing together: [sharelatex.gwdg.de](http://sharelatex.gwdg.de)
- Internet chats (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)
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
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

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Ihr persönlicher Kontakt zu uns

**Telefon**

+49 551 201-1523

Wenden Sie sich an unsere Hotline

**E-Mail**

support@gwdg.de

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

**Support**

support.gwdg.de

Ein Ticket mit Fragestellung oder Problembeschreibung erstellen

(Konto erforderlich)

**Website**

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
Office of the “Ethik-Kommission” (ethics committee)

- **Where?** → Von Siebold-Str. 3
- **When?** → Monday–Friday
  → 9:30–12:00
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.
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
AMG–Studies (studies involving pharmaceuticals)
Studies regulated by “Arzneimittelgesetz”

MPG–Studies (studies involving medical devices)
Studies regulated by “Medizinproduktegesetz”
“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 (Übernahmeverbot)

- 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
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

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)
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.
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
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
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

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

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
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

<table>
<thead>
<tr>
<th>Name</th>
<th>Position/Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prof. Dr. Otto Rienhoff</td>
<td>Head of Department</td>
</tr>
<tr>
<td>Prof. Dr. Ulrich Sax</td>
<td>IT-infrastructures for translational research</td>
</tr>
<tr>
<td>Thomas Franke</td>
<td>IT-infrastructures for clinical collaborative research</td>
</tr>
<tr>
<td>Sabine Rey</td>
<td>Medizinisches Forschungs-Daten-Integrations-Centrum (UMG-MeDIC)</td>
</tr>
<tr>
<td>Stefanie Wache</td>
<td>Intersectoral research</td>
</tr>
<tr>
<td>Dr. Harald Kusch</td>
<td>IT infrastructures in biomedical basic research</td>
</tr>
<tr>
<td></td>
<td>Contact to Göttingen eResearch Alliance</td>
</tr>
</tbody>
</table>

Contact to Göttingen eResearch Alliance

mi.med.uni-goettingen.de
7. Services at the Institute for Medical Statistics

Dr. Andreas Leha
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
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
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)
Core Facility

Medical Biometry and Statistical Bioinformatics

www.ams.med.uni-goettingen.de

NGS Consulting Hour
Core Facility

Medical Biometry and Statistical Bioinformatics

NGS Consulting

Current Plan

Bioinformatics Consultation Hour

Wann: Di, 29. Mai, 10:00 – 12:00
Wo: UBFT, Seminarraum der Hämatologie und Onkologie, Bettenhaus 2, (0.A2.006) (Karte)

Mehr Details » In meinen Kalender kopieren »
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

Department of Medical Statistics
Core Facility

Medical Biometry and Statistical Bioinformatics

www.ams.med.uni-goettingen.de

Coached working
Core Facility

Medical Biometry and Statistical Bioinformatics

► Coached working
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

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
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
7. Services of the Central Core Facility
UMG Biobank

PD Dr. Sara Nußbeck, Head of UMG Biobank
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 LN₂
WORKFLOWS OF A BIOBANK

Biomaterial and Data

Aliquots

-80°C

Storage

< -180°C

Researcher
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
SERVICES

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

ethics  IT systems and interfaces  automation

standardised workflows  frame work documents

backup strategies
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