

# The Comprehensive Central Biobank Concept of the Charité (*Zentrale Biobank Charité*)

**Application for the Funding of a  
Centralised Biomaterialbank**

**ZeBanC**

**Charité – Universitätsmedizin Berlin**



Michael Hummel, Pathology, Charité

# Biobanks integrated in the ZeBanC

Name of Biobank	Biobank Operator and Affiliation
Pathology Tissue Bank	Prof. Dr. M. Dietel Prof. Dr. M. Hummel, Institute of Pathology
National Registry for Congenital Heart Defects (NRCHD biobank)	Dr. U. Bauer, National Registry for Congenital Heart Defects
Cell Harvest	Prof. Dr. G. N. Duda, Center for Musculoskeletal Surgery Prof. F. Buttgereit, Rheumatology and Clinical Immunology
Biobank for rheumatic diseases (RheumaBanC / Sklerobank)	PD Dr. T. Häupl/Prof. Dr. G. Riemekasten, Rheumatology and Clinical Immunology
Gynecological Tumour Immunology (GTI)	PD Dr. A. M. Kaufmann, Gynecological Tumour Immunology
Genetic Studies in Families with atopic dermatitis (Genufad)	Prof. Dr. Y.-A. Lee, Pediatric Pneumology and Immunology

# Biobanks integrated in the ZeBanC

Name of Biobank	Biobank Operator and Affiliation
Charité Comprehensive Cancer Center Tumour-Biobank (CCCC TBB)	Prof. Dr. Dr. P.M. Schlag, Charité Comprehensive Cancer Center
Tumour bank Ovarian Cancer (TOC)	Prof. Dr. J. Sehouli, Women's Hospital
CSB BMB (Centre for stroke research Berlin)	Prof. Dr. A. Meisel, Clinic for Neurology / Dr. Steinbrink, Centre for Stroke Research, Berlin
NET Biobank (Neuroendocrinological tumors)	Prof. Dr. B. Wiedenmann, Hepatology and Gastroenterology
Tissue bank of Competence Network Inflammatory Bowel Disease (IBD Tissue bank)	Prof. Dr. M. Zeitz / Dr. J. Maul, Medical Department
Prof. Dr. R. Tauber, PD Dr. B. Hoppe	Central Institute of Laboratory Medicine and Pathobiochemistry, Charité

# Biobanks integrated in the ZeBanC

## Broad spectrum of sample types

- Paraffin-embedded tissue samples
- Frozen tissue samples
- Whole Blood
- Cell preparations
- Serum/plasma samples
- DNA extracts

# ZeBanC: Workflow for collection and delivery of data & samples

Collection of Charité-based biospecimens and temporarily storage



Collection of biospecimens & central long-term storage



Temporarily linkage upon project requests to ZeBanC



Clinical data

Experimental data



— Materials  
— Data

# ZeBanC: Workflow for collection and delivery of data & samples

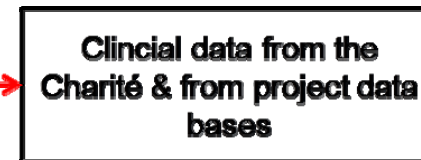
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Collection of biospecimens & central long-term storage

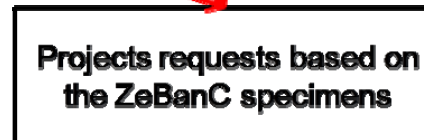


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## **Cooperation with the Charité Comprehensive Cancer Center (CCCC)**

- Identification of suitable patients
- Acquisition of patient consent
- Acquisition of patient materials (tissue, blood, etc.)
- Transfer of the materials to the ZeBanC
- Storage of the materials within the ZeBanC
- Interface between the ZeBanC and the CCC (clinical data)
- Director of the CCCC is a member of the Scientific Review Board of the ZeBanC

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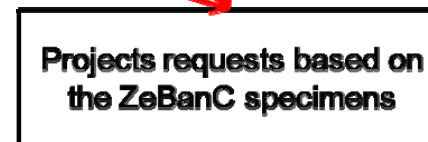
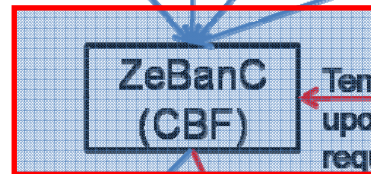


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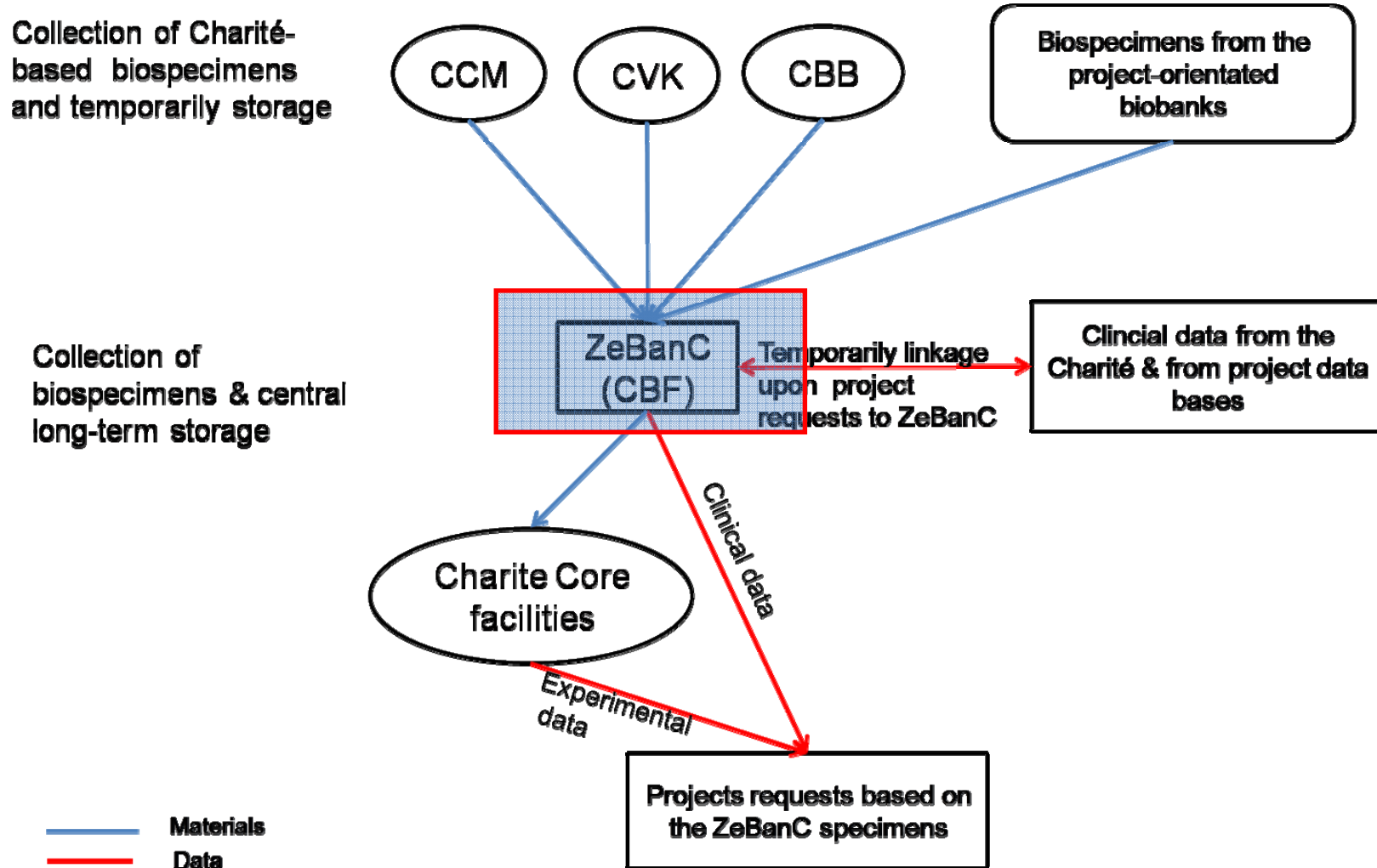


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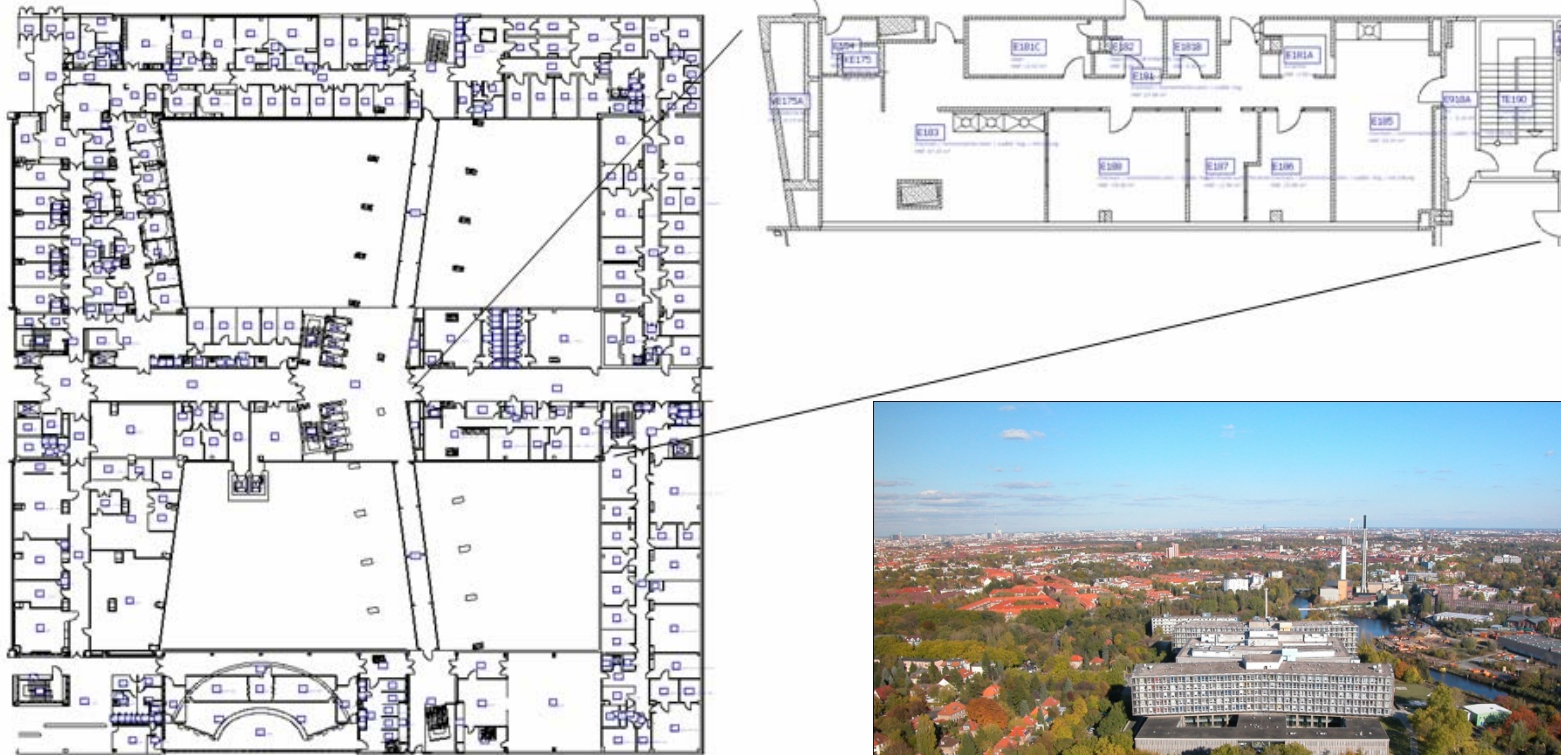
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## Designated spatial infrastructure of the ZeBanC



**Central ZeBanC storage place at the Campus Benjamin Franklin of the Charité**

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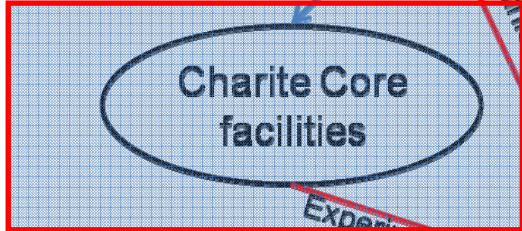
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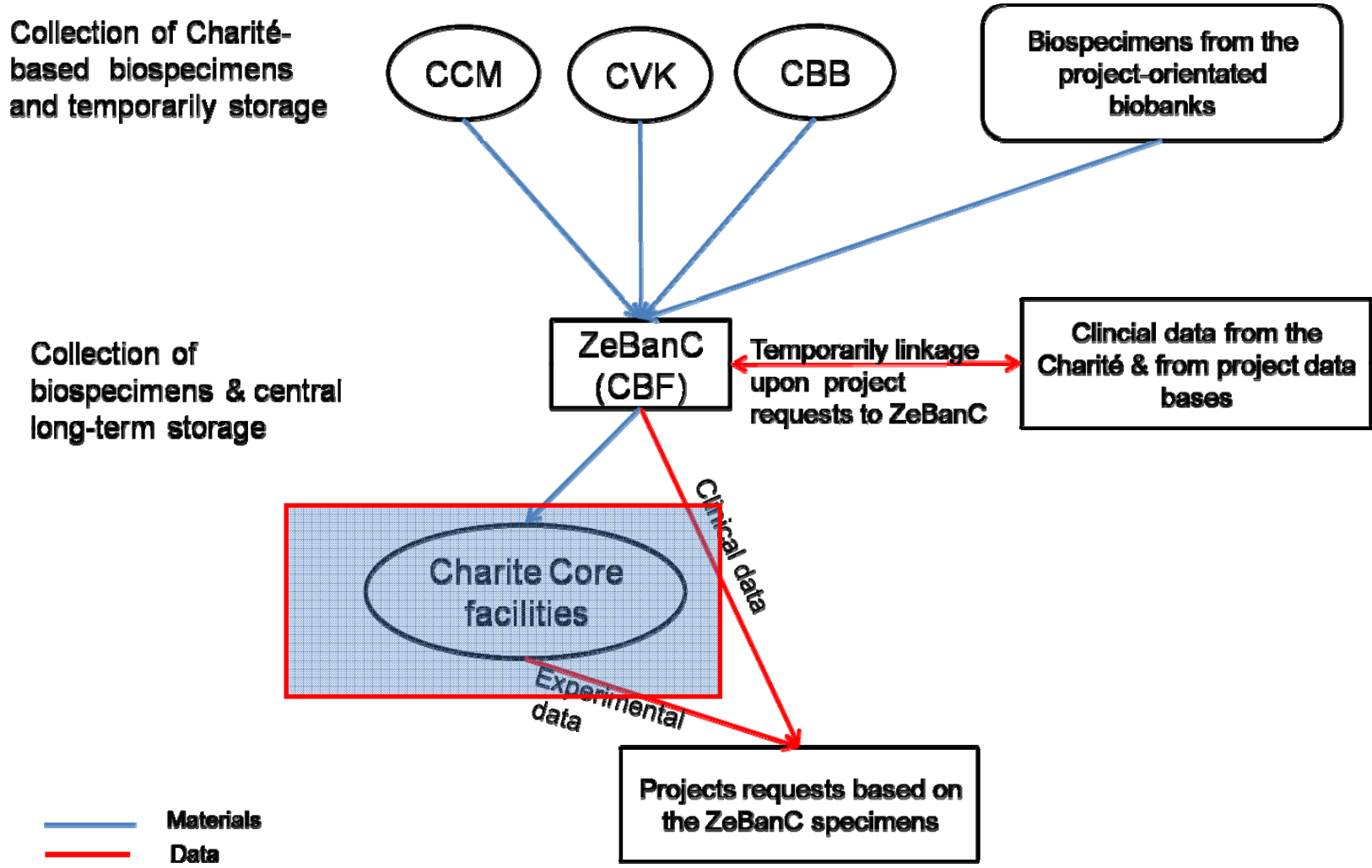


Clinical data

Experimental data



— Materials  
— Data



# Embedding of the Charité core facilities into the ZeBanC concept

- Laboratory for functional genome research (high throughput technologies)
- Electron Microscopy
- Cell sorting/Flow cytometry
- Proteome analyses (MALDI)
- Histology including morphology, immunophenotyping, (F)ISH, etc.

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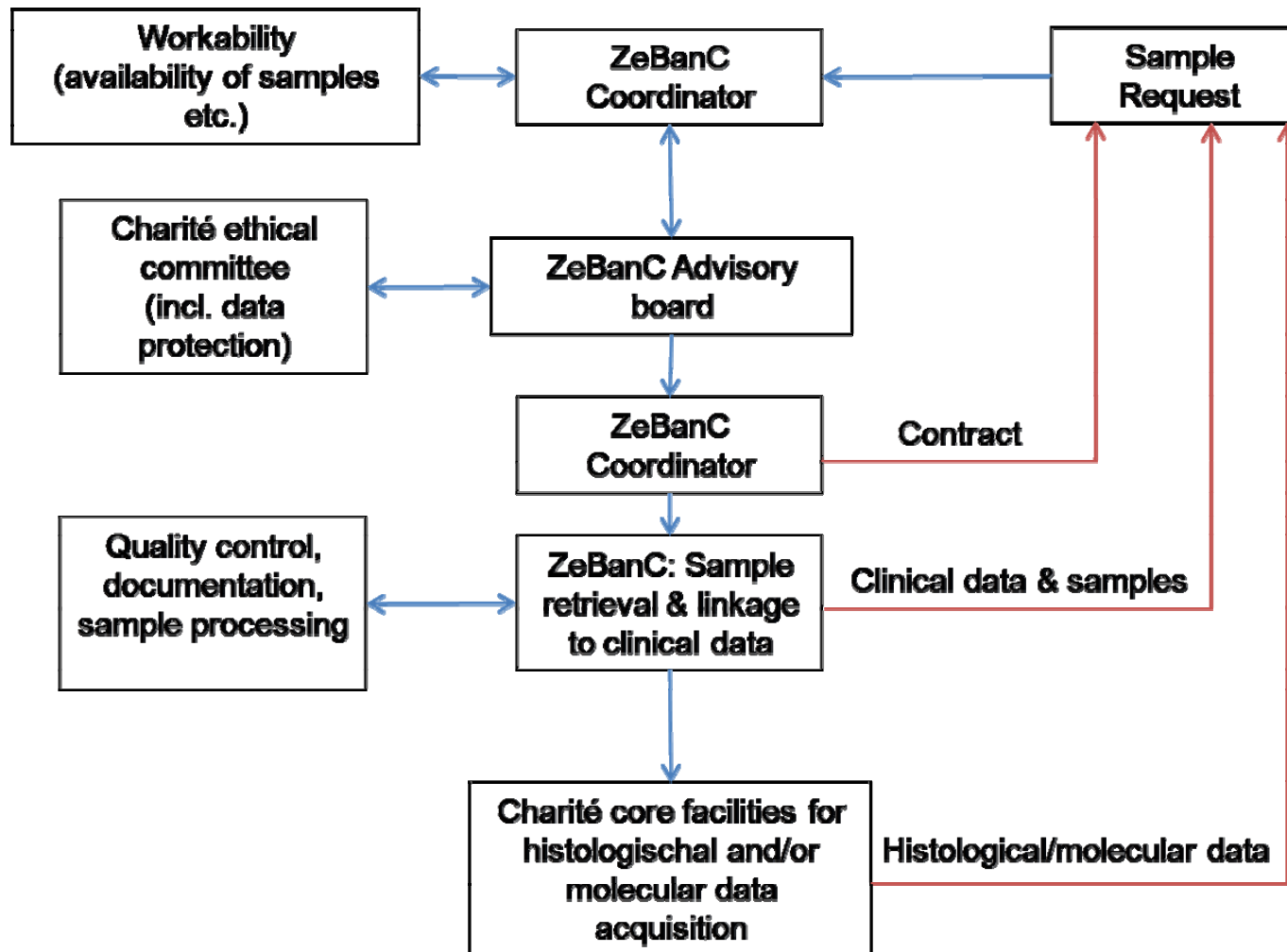
Clinical data

Experimental data



— Materials  
— Data

## Processing of requests for ZeBanC biospecimens and data



# Linkage to the German Biobank Registry, CRIP and BBMRI

- **CRIP**: Web-Interface for the search of biospecimens (tissue samples) at the Fraunhofer Institute for Biomedical Technology (IBMT)

Meta-Search for the identification of tissue samples from various sources

- **German Biobank Registry** at the TMF

Open platform for the search of biobank-related information

- **BBMRI**

Linkage of the ZeBanC at the European level

## **Close interaction with the German Consortium for Translational Cancer Research**

- Berlin, Dresden, Essen, Frankfurt, Freiburg, München, Tübingen and Heidelberg
- Establishment of biobank structures at each partner place
- Close interaction between the partners including exchange of biomaterials and clinical data
- Harmonisation of SOPs



# ZeBanC .... Perspectives

- Integration of all major biobanks at the Charité
- Central storage and data management
- Common SOPs and patient consent
- Defined rules for the distribution of samples and data
- Offering of a „full“ service (Delivery of data instead of samples)

**ZeBanC represents an excellent basis for the Charité-internal research as well as for joint projects with external partners.**

**Thank you very much for your attention!**

