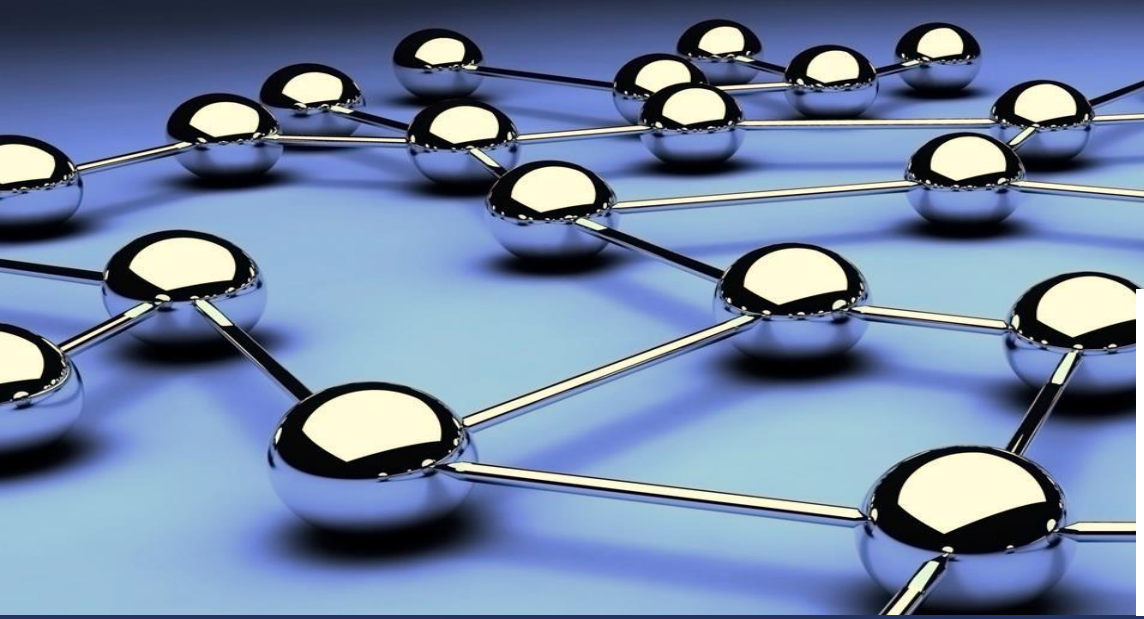

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TMF-Workshop

Catalogue of Austrian Biobanks

Horst Pichler

bmwfw
Bundesministerium für
Wissenschaft, Forschung und Wirtschaft

Funded by GZ 10.470/0016-II/3/2013

BBMRI.at Partners

BBMRI.at
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Medizinische Universität Graz	Medical University of Graz	BioBank GRAZ	Biobank Graz
MEDICAL UNIVERSITY OF VIENNA	Medical University of Vienna	BIOBANK MEDUNI WIEN BIOBANK	MedUni Wien Biobank
vetmeduni vienna	University of Veterinary Medicine, Vienna	VetCORE	VetBioBank
MEDIZINISCHE UNIVERSITÄT INNSBRUCK	Medical University of Innsbruck	MUI Biobank	MUI Biobank
ALPEN-ADRIA UNIVERSITÄT KLAGENFURT | WIEN GRAZ	Alpen Adria Universität Klagenfurt		
LSGI Life Science Governance Institute	Life Science Governance Institute, Vienna	PARACELSUS MEDIZINISCHE PRIVATUNIVERSITÄT	

BBMRI.at Workpackage 2

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WP2 – Standardization and harmonization of data management and the biobanking catalog

WPL: Johann Eder, AAU Klagenfurt

Team and partners

- Horst Pichler, AAU
- Heimo Müller, MUG
- Robert Reihs, MUG
- Georg Göbel, MUI
- Andreas Jurkowitsch, MUW
- Karine Sargsyan, MUG Biobank
- Manuel Schrott, VetMed

Accomplishments 2014

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- specification of a harmonized data schema for biobanks and their collections (+mappings to MIABIS 2.0)
- development of the BBMRI.at-platform
- development of the Austrian Biobank Catalogue
- 1st set of data of associated biobanks and collections

Levels of Biobank Information

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- 1 – basic information on biobanks
  completed
- 2 – information on sub/collections and studies
  in progress
- 3 – information on samples, donors, molecular data
  in discussion

BBMRI.at Platform - Liferay

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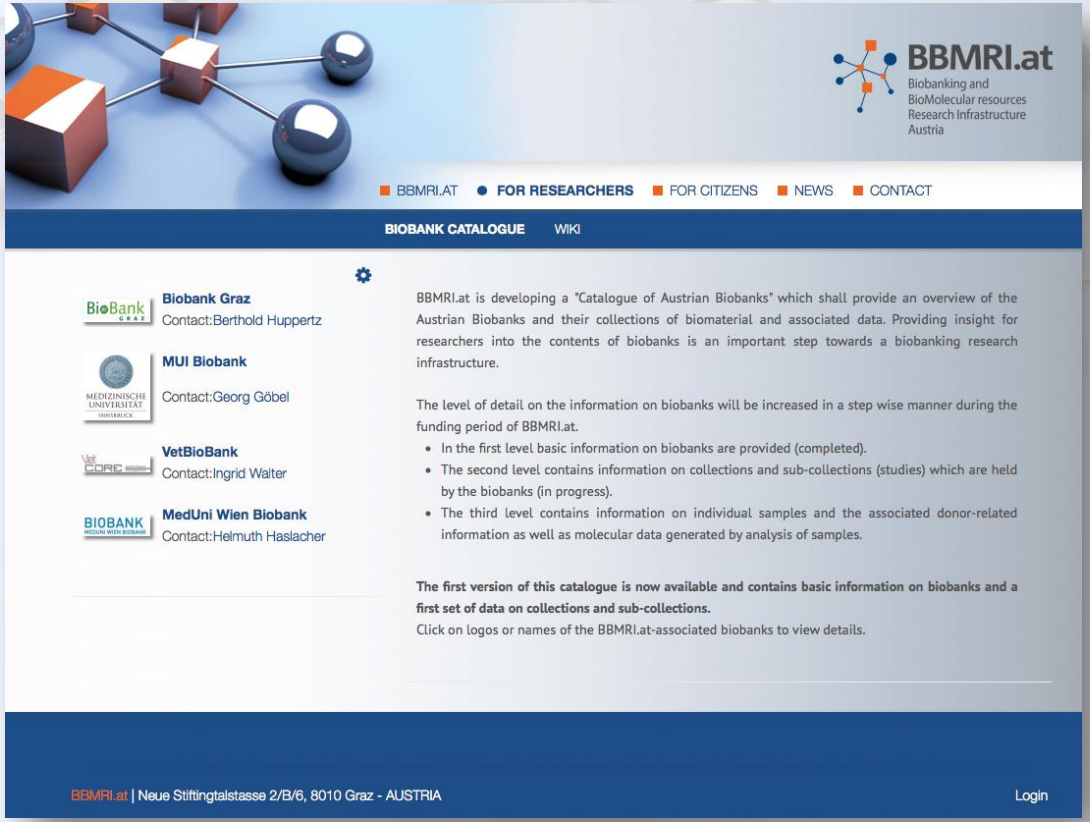

Biobank ID-Cards

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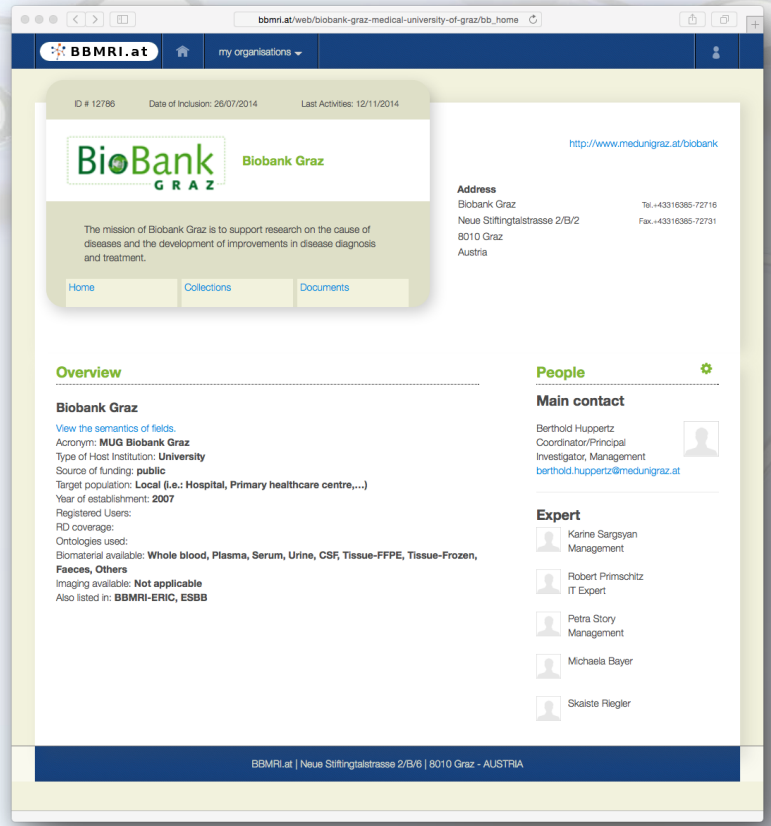

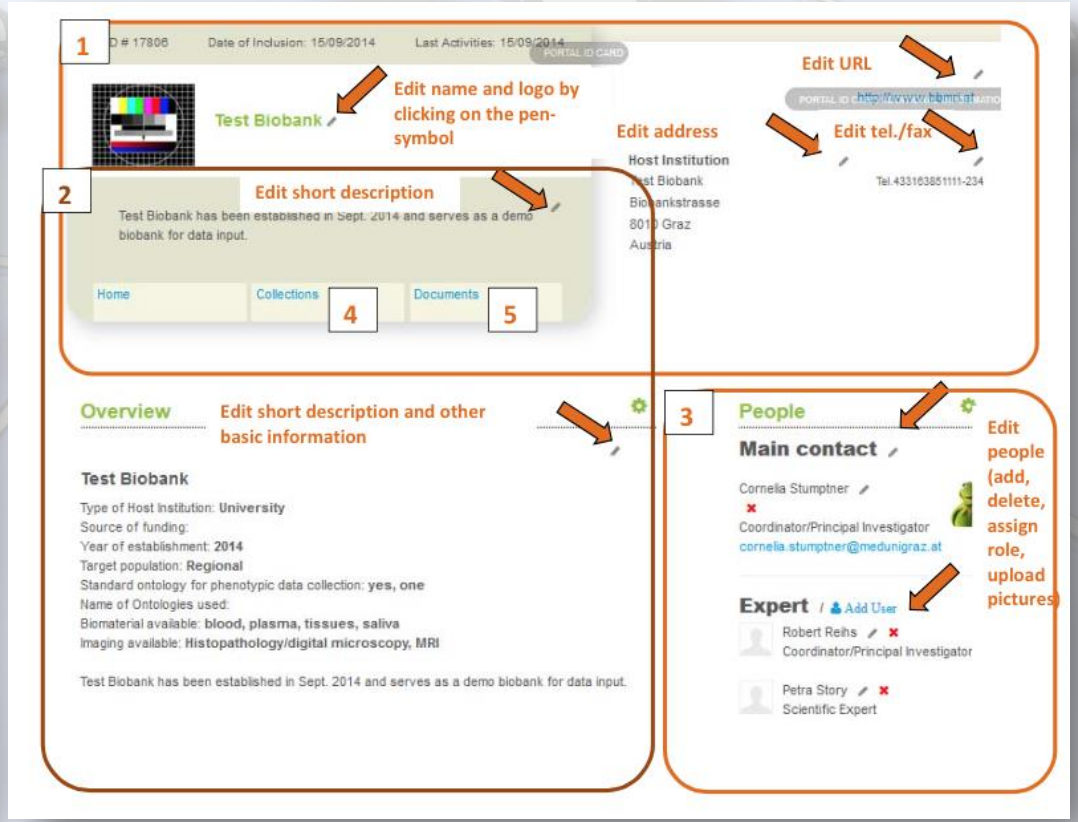

Collections and Subcollections

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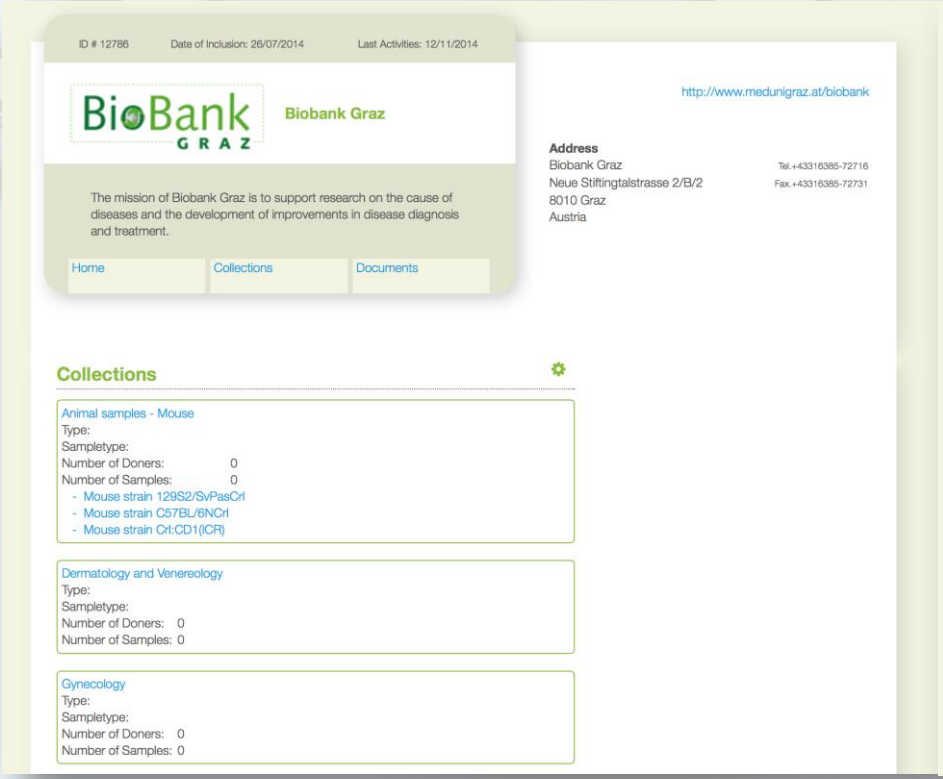

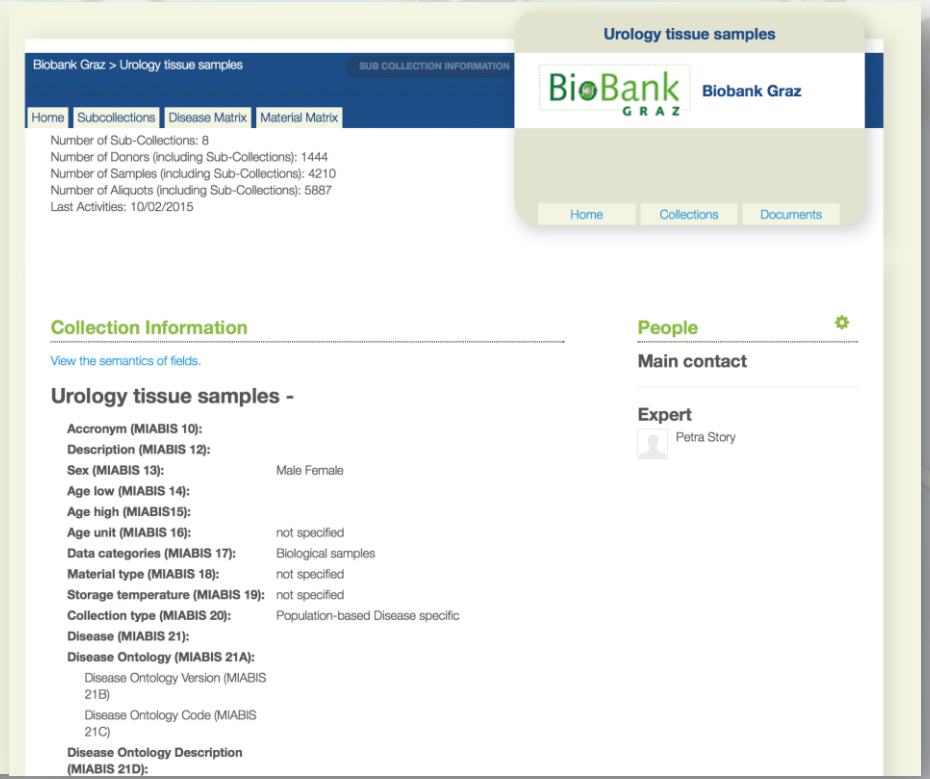

Materials and Diseases

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Material Matrix

Keywords | Search

Material Type	Specify other Material Type	Storage Temp	Storage Format	Specify other Storage Format	Number of Samples	Number of Total Aliquots	Sprec Code	Accessibility
Tissue-Frozen	Inflammation	Liquid Nitrogen	Tubes / Vials					Access is possil controlled international environments/p
Tissue-Frozen	Tumour	Liquid Nitrogen	Tubes / Vials					Access is possil controlled international environments/p
Tissue-Frozen	Neoplasia	Liquid Nitrogen	Tubes / Vials					Access is possil controlled international environments/p
Tissue-Frozen	Normal tissue	Liquid Nitrogen	Tubes / Vials					Access is possil controlled international environments/p

Disease Matrix

Keywords | Search

Name	ICD10	OMIM	Orphacode	Number of patients / donors	Data collected (MIABIS-17)	Specify other data collected	Material type collected (MIABIS-18)	Specify other material type collected	Survey data information	Specify other Survey Data Information	Acce
Inflammation					Biological sample		Tissue	Cryo preserved			Acce contr interr envir
Inflammation				386	Biological sample		Tissue paraffin preserved				Acce contr interr envir
Tumour					Biological sample		Tissue	Cryo preserved			Acce contr interr envir

Data Model V1.0 1/2

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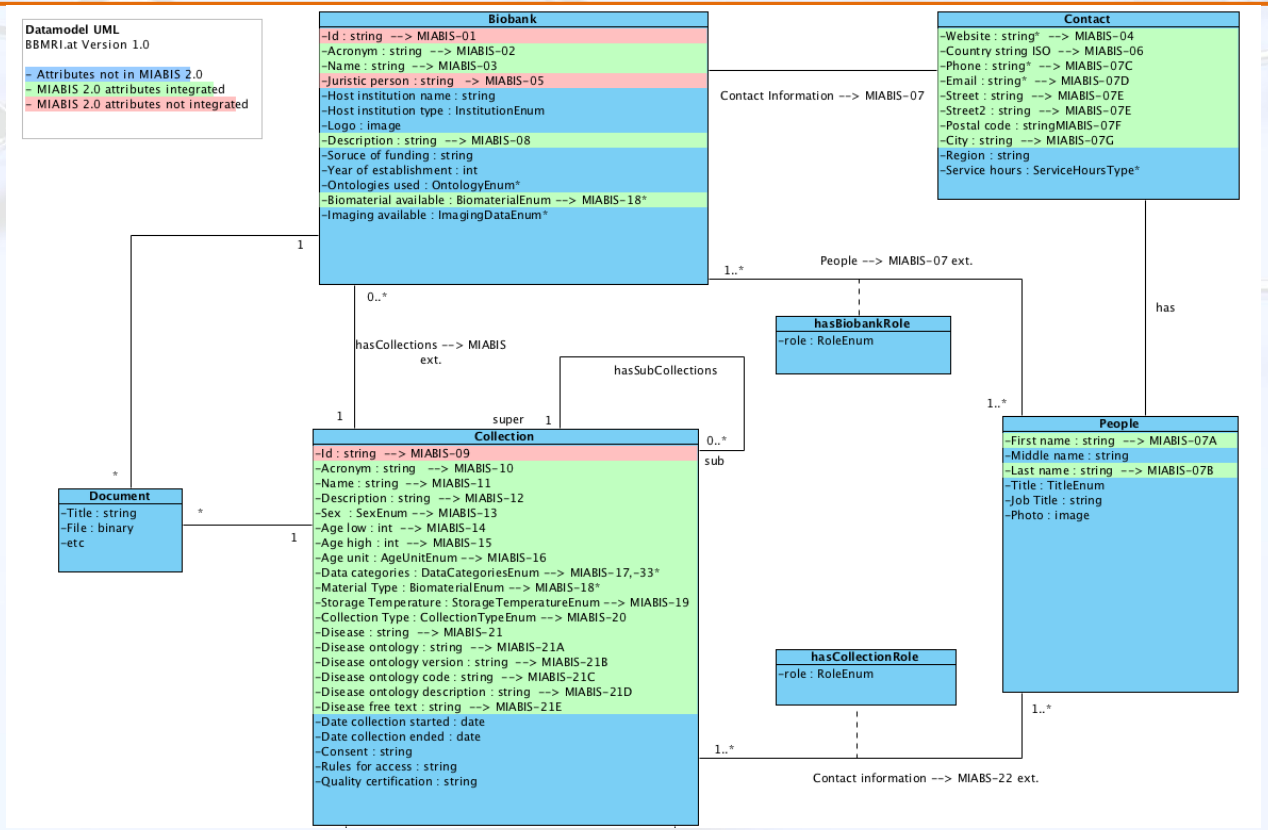

Data Model V1.0 2/2

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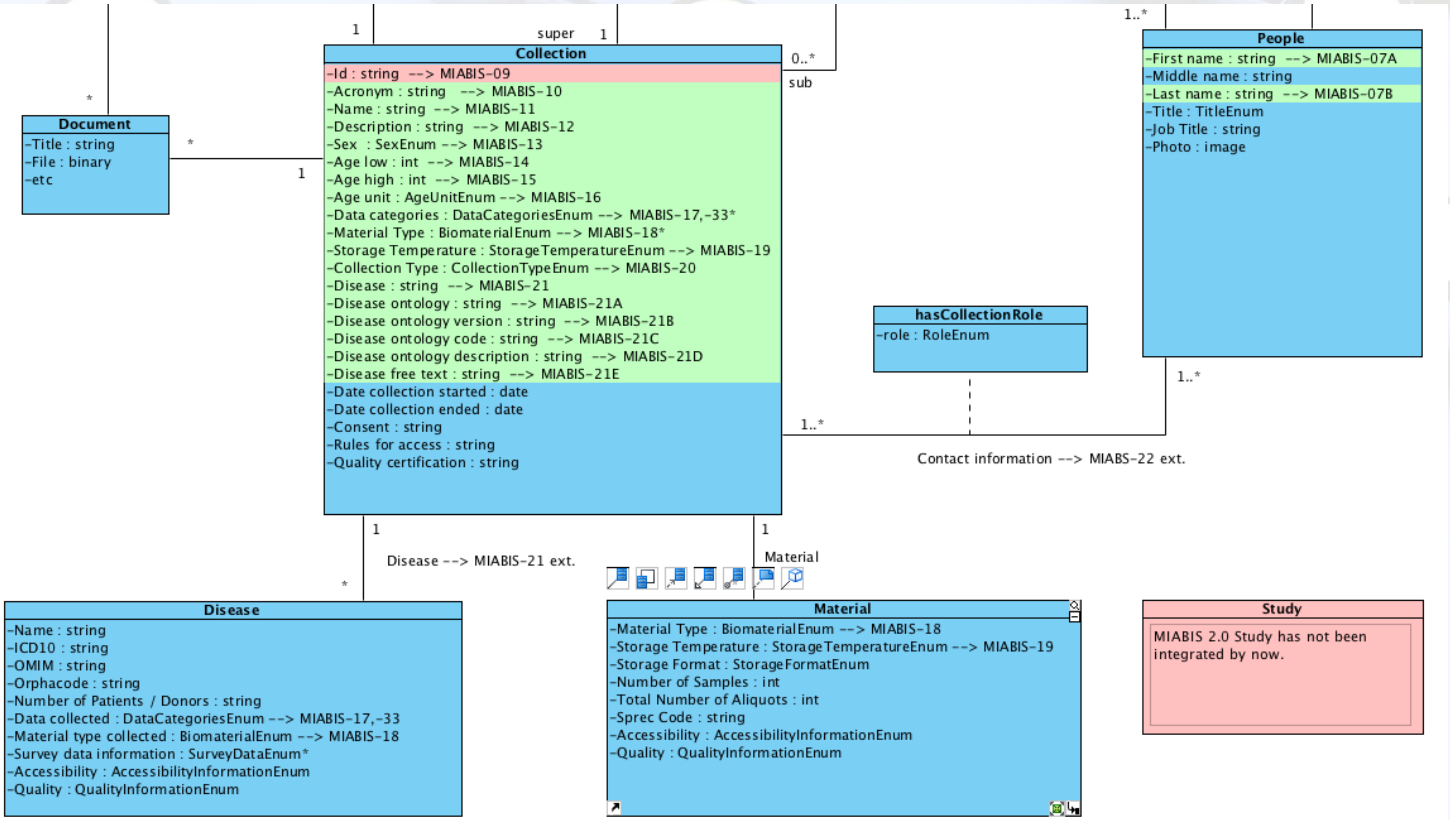

Data Exchange
Linked Open Data Harvesting

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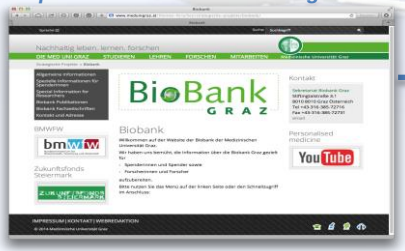
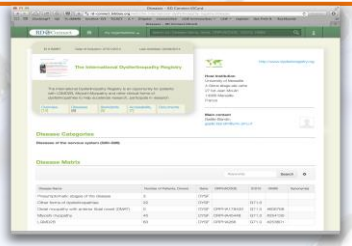
http://bbmri.at/wob/bio-bank-graz



Biobank A

LOD
Linked
Data

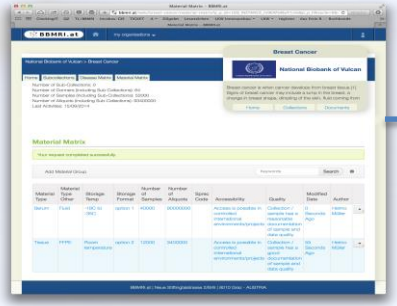


RD Connect

LOD
Linked
Data

RDF

http://bbmri.eric/node/austria



BBMRI-AT

RDF

BBMRI-ERIC

Biobank B

Biobank C

Biobank D

other national nodes

URI pattern

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- http://bbmri.at/wob/tissue-bank-gynecology-innsbruck
- http://bbmri.at/wob/tissue-bank-gynecology-innsbruck.rdf
- http://bbmri.at/wob/tissue-bank-gynecology-innsbruck.html

- http://bbmri.at/wob/tissue-bank-gynecology-innsbruck/tissuecol1
- http://bbmri.at/wob/tissue-bank-gynecology-innsbruck/tissuecol1.rdf
- http://bbmri.at/wob/tissue-bank-gynecology-innsbruck/tissuecol1.html

Example

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@prefix rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#> .

@prefix foaf: <http://….>

@prefix miabis: <http://….>

<http://bbmri.at/wob/tissue-bank-gynecology-innsbruck>

rdf:type: miabis:biobank

miabis:name ”Gewebebank, Gynäkologie, Innsbruck" ;

miabis:web http://frauenheilkunde-innsbruck.uklibk.ac.at/

miabis:PI http://bbmri.at/wob/tissue-bank-gynecology-innsbruck/persons/Elisabeth_Mueller_Holzner;

<http://bbmri.at/wob/tissue-bank-gynecology-innsbruck/persons/Elisabeth_Mueller_Holzner>

rdf:type: foaf:Persom

foaf:name “Elisabeth Müller Holzner”

foaf:mbox elisabeth.mueller@i-med.ac.at

foaf:based-near http://dbpedia.org/resource/Innsbruck

Current Work and Outlook

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- Data Model 2.0
  - incorporation of user feedback
  - full integration of MIABIS 2.0 (3.0?)
  - integration of SOP and quality information
  - samples? ➔ BBMRI-ERIC pilot study
- Interoperability
  - RDF-representation
  - Linked Open Data interfaces
- Query interfaces
  - graphical user interface (on platform)
  - SPARQL

Further Topics requested ...

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- registry mechanisms → via platform; planned: 2-step review workflow
- data models used → mandatory BBMRI.at Data Model / MIABIS-mapping
- incentives to participate → BBMRI-participation & growing need to cooperate / exchange / publish
- granularity of registered data →aggregated on level 1 and 2; not on level 3
- coverage / completeness → currently: unknown
- focus of biobanks → clinical and epidemiological
- perspectives → project-oriented and biobank-oriented
- timeliness of data → currently: calls for data-collection rounds; responsibility of editors
- preparedness for exchange → to ERIC: basically yes; LOD: in development

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THANK YOU!

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Bundesministerium für Wissenschaft, Forschung und Wirtschaft