

For better quality in biobanks – Audit programmes support improvement measures

BIOBANK OPEN FORUM JAPAN 29 AUGUST 2023

Andrea Wutte

Head of Quality Management Department





WE ARE 25

20 Members

Austria Belgium

Bulgaria

Cyprus

Czech Republic

Estonia

Finland

Germany

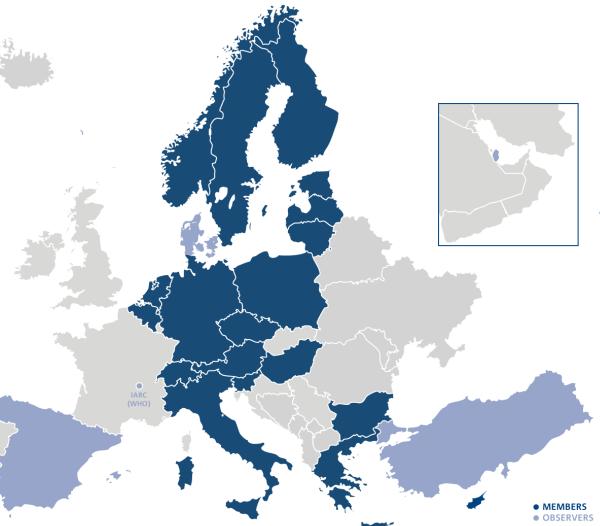
Greece

Hungary

Italy Latvia Lithuania Malta **Netherlands Norway Poland** Slovenia

Sweden

Switzerland



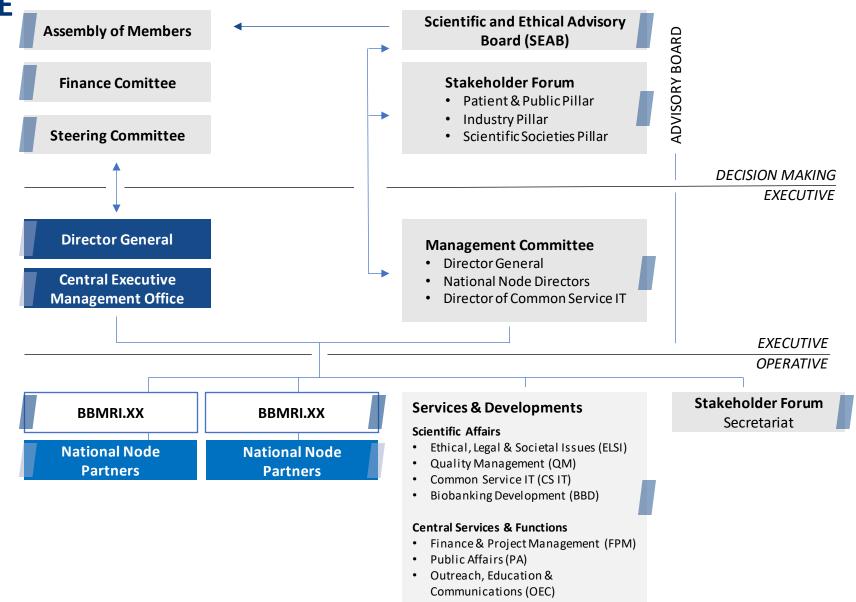
5 Observers

Denmark IARC/WHO Qatar Spain **Turkey**

- > 400 biobanks
- 3 Expert Centres
- Headquarters in Austria
- 25 National Nodes
- and affiliated partners
- 25 active projects
- 19 submitted projects (2023) 20 completed projects



GOVERNANCE









QUALITY MANAGEMENT SERVICES – REVIEW AND OUTLOOK

- History and Quality Policy
- QM Engagement in International Organisations for Standardisation
- International standards relevant for biobanking
- ➤ BBMRI-ERIC Quality Management Services "Knowledge / Training / Audit Programme / Research"
- > BBMRI-ERIC Audit Programme



BBMRI-ERIC Quality Label a quality indicator for biobanks and sample collections

> BBMRI-ERIC Support Biobanks for accreditation



Biobank Accreditation - by 3rd party - National Accreditation bodies



History

ESFRI ROADMAP / PREPARATORY PHASE 2008 – 2011 / LEGAL STATUS DECEMBER 2013 – 10 YEAR ANNIVERSARY 2023









BBMRI-ERIC QUALITY POLICY

All Partners should commit themselves to implement quality management/assurance procedures compliant with applicable European and International standards, OECD best practice guidelines for Global Biological Resource Centres Networks and WHO/IARC Common Minimum Technical Standards and Protocols for Biobanks Dedicated to Cancer Research.

SOPs should be established and made publicly available for all processes related to sample collection, processing, storage, retrieval and dispatch. It is recommended that SOPs should follow the procedures as specified in the WHO/IARC guidelines for biological resource centres for cancer research whenever feasible.

A biobank (collection) shall be provided a unique persistent identifier as a part of registering the biobank (collection) in the BBMRI-ERIC Directory. Partners are also encouraged to participate and benefit from the quality services of BBMRI-ERIC.

INTERNATIONAL BIOBANKING STANDARD

- Biotechnology - Biobanking - General requirements for biobanking (ISO 20387:2018)

This document specifies general requirements for the competence, impartiality and consistent operation of biobanks including quality control requirements to ensure biological material and data collections of appropriate quality.

This document is applicable to all organizations performing biobanking, including biobanking of biological material from multicellular organisms (e.g. human, animal, fungus and plant) and microorganisms for research and development.

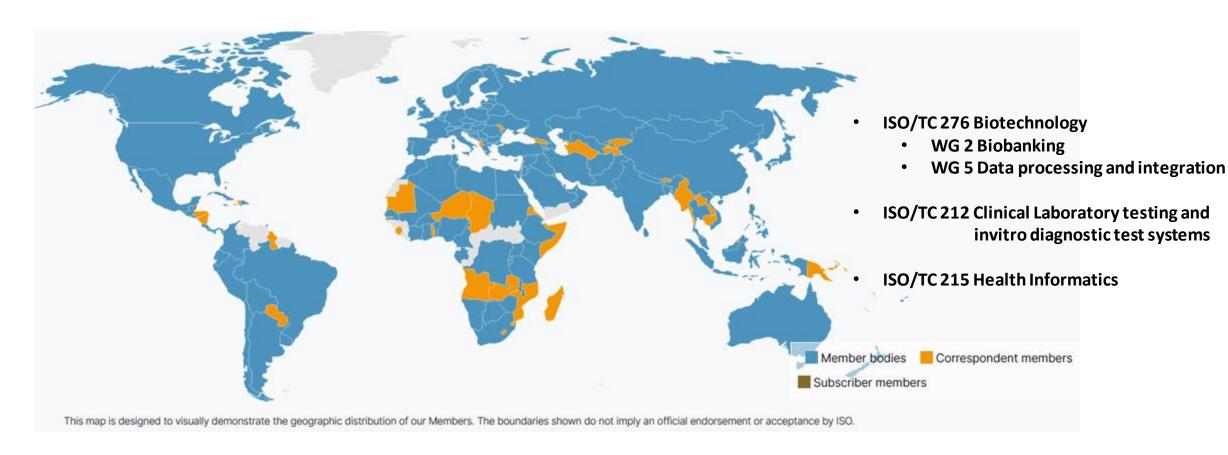
Biobank users, regulatory authorities, organizations and schemes using peer-assessment, accreditation bodies, and others can also use this document in confirming or recognizing the competence of biobanks.

Quality management systems - Requirements (ISO 9001:2015)

This International Standard promotes the adoption of a process approach when developing, implementing and improving the effectiveness of a quality management system, to enhance customer satisfaction by meeting customer requirements. This International Standard can be used by internal and external parties, including certification bodies, to assess the organisation's ability to meet customer, statutory and regulatory requirements applicable to the product, and the organisation's own requirements.

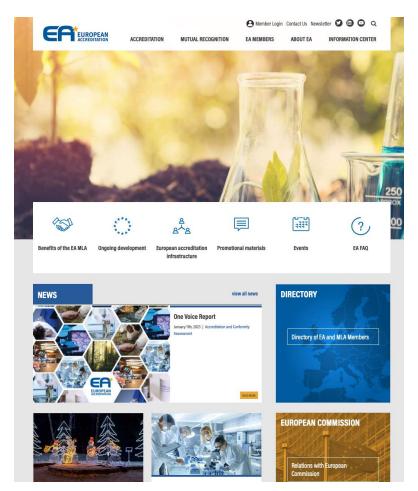
BBMRI-ERIC The European research infrastructure for biobanking and biomolecular resources in health and life sciences

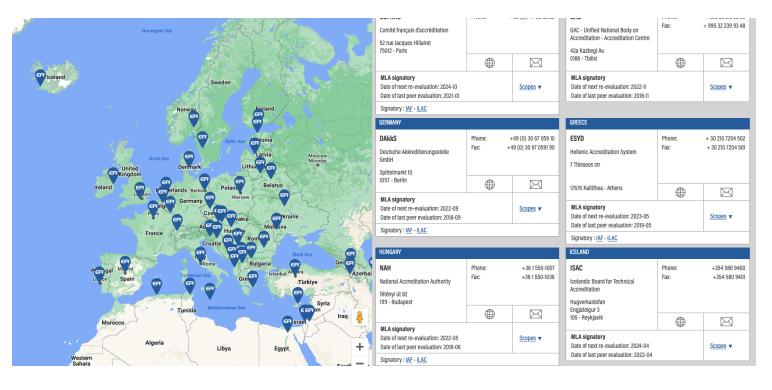
SINCE 2015 BBMRI-ERIC LIAISON WITH INTERNATIONAL STANDARDIZATION ORGANISATION (ISO)





BBMRI-ERIC COLLABORATION WITH EUROPEAN ACCREDITATION (EA)





NETWORK OF ACCREDITATION BODIES

EA Multilateral Agreement (EA MLA) objective
'Accredited once, accepted everywhere'



MUTUAL RECOGNITION EUROPEAN ACCREDITATION (EA) / ILAC / IAF



IAF/ILAC Recognition

Presentation of IAF/ILAC Peer evaluation of EA Part of the global network

Mutual Recognition

The EA MLA Peer evaluation IAF/ILAC Recognition and ILAC (International Laboratory Accreditation Cooperation), the two global associations

It means that accreditation by one of the EA MLA Members is considered to give as much confidence as accreditation delivered by any signatory to the IAF or ILAC mutual agreement.

"Accredited once, accepted everywhere!"

It means that a test report or certificate issued by an accredited CAB can be recognized by the signatories to the IAF and ILAC multilateral agreements. In this way, the EA MLA acts as an international passport to trade.

Thanks to this mutual recognition:

- · international markets have confidence in the EA MLA and the conformity assessment results provided by organizations accredited by EA MLA signatories;
- . there is no need for products and services to be re-tested, re-calibrated, re-inspected or re-certified in each country into which they are imported and sold;
- · it helps free movement of goods and services at European and global levels.



IAF/ILAC Recognition

Presentation of IAF/ILAC Peer evaluation of EA Part of the global network

Mutual Recognition

The EA MLA Peer evaluation IAF/ILAC Recognition

PRESENTATION OF IAF/ILAC



The International Accreditation Forum (IAF) is the world association of National Accreditation Bodies (NAB) interested in conformity assessment in the fields of management systems, products, services, personnel, validation and verification, and other similar programs of conformity assessment.

IAF has two objectives:

- 1. Ensure that its Accreditation Body Members only accredit bodies that are competent to do the work they undertake and are not subject to conflicts of interest.
- 2. Establish mutual recognition arrangements, known as Multilateral Recognition Arrangements (MLAs), between its Accreditation Body Members which reduce risk to businesses and their customers by ensuring that an accredited certificate may be relied upon anywhere in the world.

Currently there are four main scopes for the IAF MLA:

- Management Systems Certification using ISO/IEC 17021-1;
- Product Certification using ISO/IEC 17065;
- Certification of Persons using ISO/IEC 17024;
- Validation and Verification using ISO 14065.

As of February 2022, the IAF MLA Members are:

- 5 Recognized Regional Accreditation Groups:
 - Arab Accreditation Cooperation (ARAC):
 - European co-operation for Accreditation (EA);

 - Asia Pacific Accreditation Cooperation (APAC);

88 National Accreditation Body Members.

For further details, visit the IAF website or read IAF newsletters





KNOWLEDGE HUB

Whether you are looking for training opportunities or practical support with your quality management - quality experts can provide you with a solution tailored to your needs.

TRAINING & SUPPORT

Within the BBMRI.QM network, we offer in-house and online training, university courses, summer schools, short courses, workshops, and consulting services covering different quality management systems:

BBMRI.QM Training & Education Programmes:

- Training series about molecular in vitro diagnostic examinations specifications for pre-examination processes Recordings available! **
- Training series about the biobanking standard ISO 20387:2018 Recordings available!

BBMRI.QM Academy:

- What is the BBMRI.QM Academy?
- Educational webinars Recordings available!

BBMRI.QM News and Events:

Success stories of our BBMRI.QM community

Directory

If you run a non-certified biobank and/or you want to know if the samples stored fulfill certain quality requirements, get the support of BBMRI.QM. We offer peerreview-style audits on request. Take the next QM improvement step together with

Process flow: From the SAS to a Quality Label in the BBMRI-ERIC Directory

Step 1: Assess your processes with the BBMRI-ERIC Self-Assessment Survey (BBMRI-ERIC SAS).

- What is the BBMRI-ERIC SAS?
- Short explanation about access principles to the BBMRI-ERIC SAS
- Request the BBMRI-ERIC SAS

Step 2: Request a BBMRI-ERIC audit

BBMRI-ERIC Audit

Training

Step 3: A positive audit will lead to a **Quality Label in the Directory**

Quality Label in the BBMRI-ERIC





AUDITING

Quality of biological material / data

Collaborate biological material / data in projects

Share knowledge harmonised / standardised procedures

Find everything you need to know about quality management in biobanking and biomedical research in one place: The BBMRI.QM Knowledge Hub consists of a pool of experts that can help you with any of the following:

- BBMRI-ERIC liaisons with international standardization organizations
- International standards relevant for biobanking and biomedical research
- Quality management tasks in EU
- Biobanking in times of COVID-19 Recordings available!
- Working Group QMS
- Meet the QM Team

Consultation Hours:

BBMRI.QM Newsroom

QM Documents:

- BBMRI.ch SBP Quality Manual
- BBMRI.de QM Biobank Manual
- BBMRI.pl Manual of Biobank QM
- Read our special issue of the Biobanks Europe Magazine on quality management





BBMRI-ERIC Audit Programme

BBMRI-ERIC Quality Label











BUILDING BIOBANKING ACTIVITIES ON INTERNATIONAL STANDARDS

- Biobanking General requirements for biobanking, ISO 20387:2018
- Quality management systems Requirements, ISO 9001:2015
- Specifications for pre-examination processes for tissues, blood, serum, plasma, saliva, stool, body fluids *and more of these Technical Specifications for molecular in vitro diagnostic examinations
- Guidelines for auditing management systems, ISO 19011:2018
- !new! Provenance information model for biological material and data Part 1: Design concepts and general requirements, ISO/TS 23494-1:2023



INTERNATIONAL **STANDARD**

ISO 20387

First edition

Biotechnology - Biobanking -General requirements for biobanking

Biotechnologie — «Biobanking» — Exigences générales relatives au «biobanking»



7 Process requirements

- 7.2 Collection of biological material and associated data
- 7.2.1 Documented information requirements
- 7.2.2 Pre-acquisition information
- 7.2.3 Collection procedure



"21" ISO/CEN standards for pre-examination processes

ISO 20387:2018(E)

© ISO 2018



QUALITY OF BIOLOGICAL MATERIAL

Lippi G. et al. Preanalytical quality improvement: from dream to reality Clin Chem Lab Med. **2011** Jul; 49(7):1113-26.).

Stephen A Bustin. The reproducibility of biomedical research: sleepers awake! *Biomolecular Detection and Quantification* **2014**, pp. 35-42

Freedman LP et al. The Economics of Reproducibility in Preclinical Research. Plos Biol. **2015** Jun 9;13(6):e1002165.





SPECIMEN PROCESSING

INTERNATIONAL STANDARDS



ISO 20184-1 frozentissue – Part 1: Isolated RNA

ISO 20184-2 frozen tissue – Part 2: Isolated proteins

ISO 20184-3 frozentissue – Part 3: Isolated DNA

ISO 20166-1, FFPE tissue – Part 1: Isolated RNA

ISO 20166-2, FFPE tissue – Part 2: Isolated proteins

ISO 20166-3, FFPE tissue – Part 3: Isolated DNA

ISO 20166-4, FFPE tissue – Part 4: In situ detection techniques

ISO 20186-1, venous whole blood - Part 1: Isolated cellular RNA

ISO 20186-2, venous whole blood - Part 2: Isolated genomic DNA

ISO 20186-3, venous whole blood - Part 3: Isolated circ. cell-free

DNA from plasma

ISO 23118:2021 metabolomics in urine, venous blood serum and plasma

ISO/TS 21899:2020, Validation and verification of processing methods for biological materials in biobanks

ISO/TS 20658:2017, Medical laboratories — Requirements for collection, transport, receipt, and handling of samples





SPECIMEN PROCESSING

EUROPEAN STANDARDS



CEN/TS 17390-1:2020, circulating tumor cells (CTCs) in venous whole blood – Part 1: Isolated RNA

CEN/TS 17390-2:2020, circulating tumor cells (CTCs) in venous whole blood – Part 2: Isolated DNA

CEN/TS 17390-3:2020, circulating tumor cells (CTCs) in venous whole blood – Part 3: Preparations for analytical CTC staining

CEN/TS 17626:2021, human specimen – Isolated microbiome DNA

CEN/TS 17688-1:2021, Fine Needle Aspirates (FNAs) – Part 1: Isolated cellular RNA

CEN/TS 17688-2:2021, Fine Needle Aspirates (FNAs) – Part 2: Isolated proteins

CEN/TS 17688-3:2021, Fine Needle Aspirates (FNAs) – Part 3: Isolated genomic DNA

CEN/TS 17742:2022, venous whole blood – isolated ccf RNA from plasma

CEN/TS 17747:2022, exosomes and other extracellular vesicles in venous whole blood - DNA, RNA and proteins

CEN/TS 17811:2022, urine and other body fluids - Isolated cf DNA





INTERNATIONAL STANDARDS

DATA QUALITY, DATA SECURITY

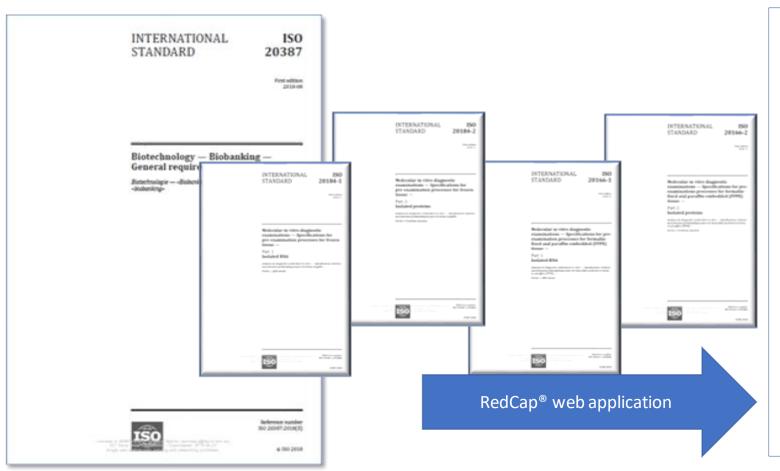
- Data quality Master data and Data quality management: ISO 8000 Series
- Information technology Security techniques Information security management systems Requirements, ISO/IEC 27001:2022
- Information security, cybersecurity and privacy protection Information security controls, ISO/IEC 27002:2022
- Information technology Security techniques Code of practice for protection of personally identifiable information (PII) in public clouds acting as PII processors, ISO/IEC 27018:2019
- And more...

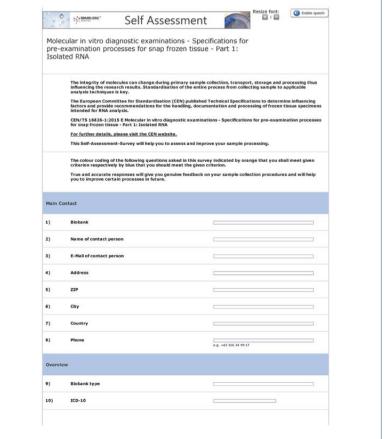


BBMRI-ERIC audit programmes support improvement measures



FROM STANDARD TO SELF-ASSESSMENT SURVEY (SAS)

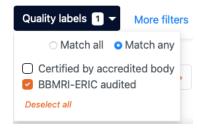


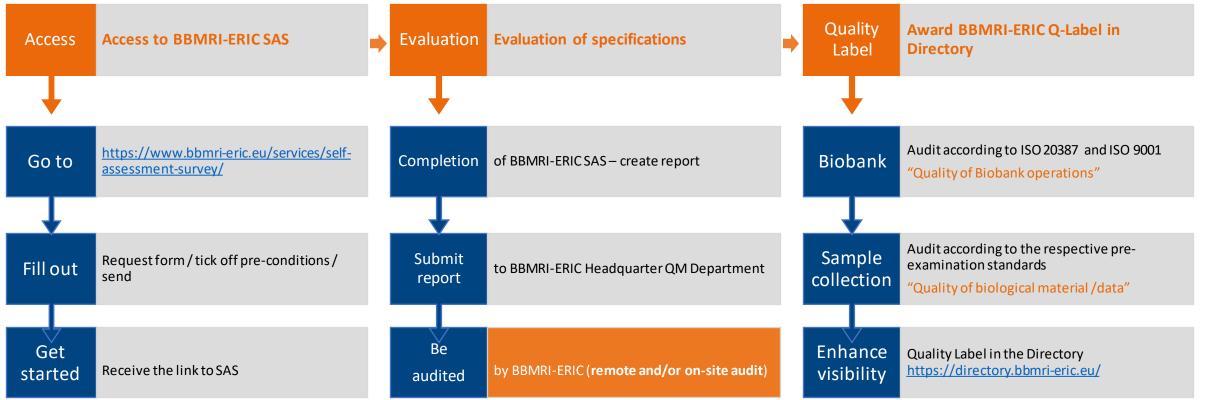


BBMRI-ERIC AUDIT PROGRAMME

OVERVIEW: FROM THE BBMRI-ERIC SELF-ASSESSMENT SURVEY (SAS) TO QUALITY LABEL









ACCESS TO BBMRI-ERIC SAS ON WEBSITE



AUDITING

If you run a non-certified biobank and/or you want to know if the samples stored fulfill certain quality requirements, get the support of BBMRI.QM. We offer peerreview-style audits on request. Take the next QM improvement step together with us!

Process flow: From the SAS to a Q-mark in the BBMRI-ERIC Directory

Step 1: Assess your processes with the BBMRI-ERIC Self-Assessment Survey (BBMRI-ERIC SAS).

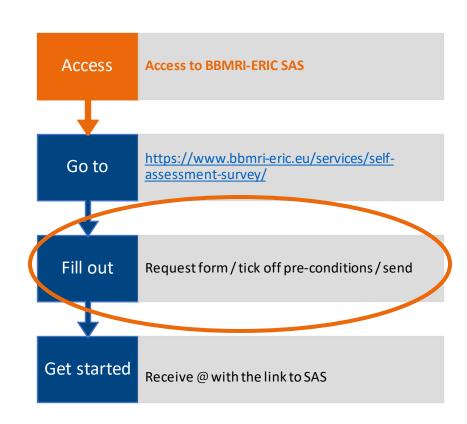
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- Short explanation about access
- Request the BBMRI-ERIC SAS

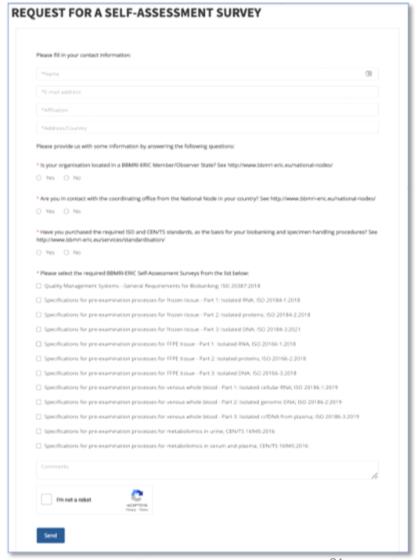
Step 2. Request a RRMDI EDIC addit

BBMRI-ERIC Audit

Step 3: A positive audit will lead to a quality mark in the Directory

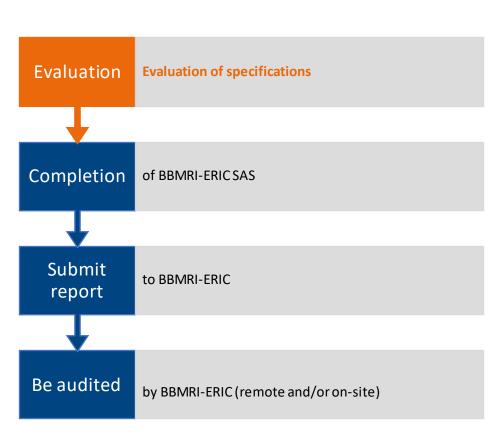
Q-mark in the BBMRI-ERIC Directory

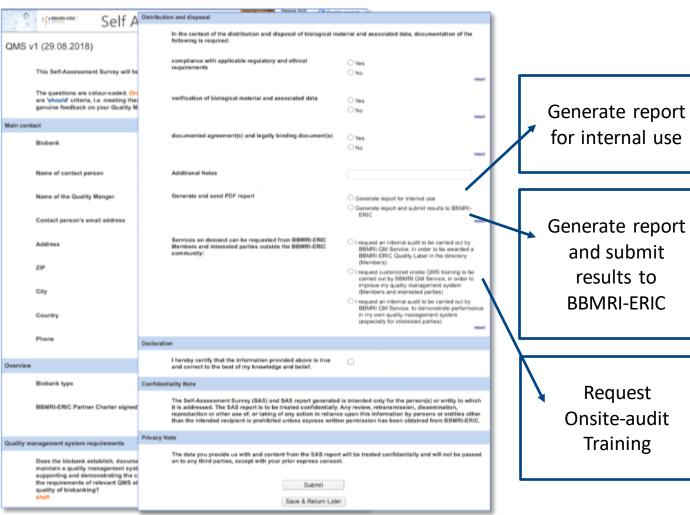






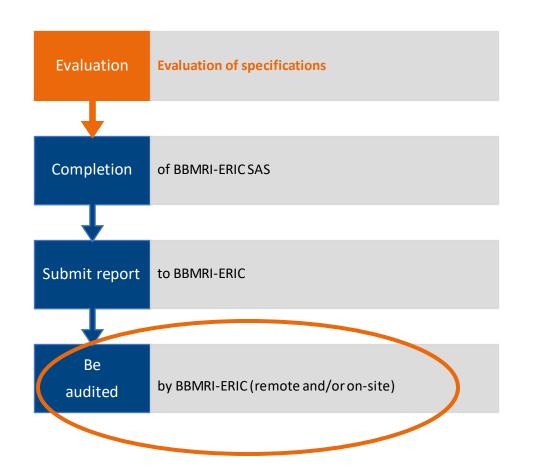
SELF-EVALUATION







EVALUATION OF SPECIFICATIONS



BIOBANK LEVEL ISO 20387

SAMPLE/COLLECTION LEVEL PRE-ANALYTICAL STD'S

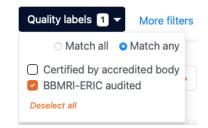
- 1. conducting remote audit
- 2. Conducting on-site audit
 - a) by auditors of the country
 - b) by BBMRI-ERIC Headquarters QM
- 3. Positive assessment Quality Label

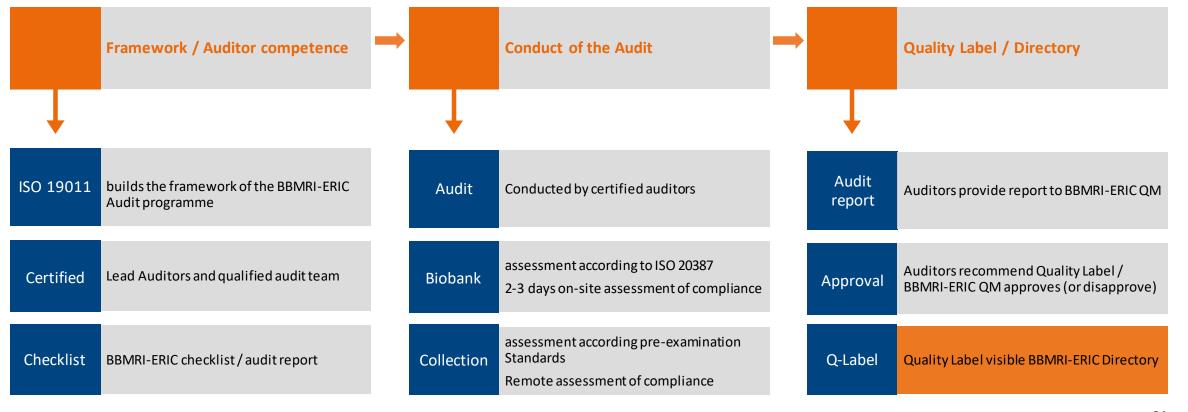
- 1. conducting a remote audit
 - a) by BBMRI-ERIC Headquarters QM
 - b) by auditors of the country
- 2. Positive assessment Quality Label

BBMRI-ERICAUDIT PROGRAMME

AUDIT PROCESS









BBMRI-ERIC ONSITE AUDIT

CHECKLIST / REPORT

BBMRI-ERIC Biobank on-ISO 20387:2018 Biobanking

Based on the content of this document, the t from the BBMRI-ERIC Headquarters — Quali QM) or by auditors on behalf of BBMRI-ERIC preparation for the audit and as an audit rep the BBMRI-ERIC QM by the auditors. A clos observation is conducted by the auditors at BBMRI Quality Label in the BBMRI-ERIC Dir review of the documents and the closing disk respective blobank works according to the p

ACCESS TO BIMMINERIC SAS

*GO TO
bimmineric subenvices/self assessment survey/
*RLLOUT
*REQUEST from / tok off pre-conditions / send
*GET SWATTO
*Because of with the link to SAS

**In the conditions / send
**In

AUDIT PROCESS

- REVIEW SAR-REPORT
BRANKI-RIC FIG.
- REMOTE AUDIT
BRANKI-RIC FIG.
- REMOTE AUDIT
- AUDIT ACCORDING TO ISOSI 2018
BRANKI-RIC FIG./ NATIONAL NODES GM
BRANKI-RIC FIG./ NATIONAL NODES GM

CBBMRt ERIC audit checklist report V2.20220001.dx

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Completion of the audit process by BBMRI-ERIC Quality Management
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e documents for nent title / date / ver o Findings	The auditors recommend that the biobank addresses all critical non-compliances (CNC) and submit evidence of improvement to the auditors for further review. In case of a positive assessment, an addresdum to the audit report will be submitted to BBMR-ERF by the auditors.	0
	Auditor statement*:	
	Place: Date: Name: Signature:	
	During 19 closing meeting, the blobank was informed about the preliminary result of the audit outcome appraise. (C, NNC, CNC) The present of the principle of ISO 20387:2018 and is carrying out its work processes in accordance with the international. This is dist statement must be written and signed personally by the auditor.	rdance (th the
	CI ling discussion between auditors and BBMRI-ERIC OM To completed undit report is sent to BBMRI-ERIC OM by the auditors. A closing discussion on the audit of ervalions is conducted by the auditors and BBMRI-ERIC OM, BBMRI-ERIC OM will award the BBMRI BMRI-ERIC Directory based on the recommendation of the auditors, the review of the documents and the	Quality Labeen the
	ompletion of the audit process by BBMRI-ERIC Quality Management at Headquarters BMRI-ERIC OM statement*:	
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BIGGEST BIOBANK DIRECTORY



MAKING NEW TREATMENTS POSSIBLE

BBMRI-ERIC is a European research infrastructure for biobanking. We bring together all the main players from the biobanking field – researchers, biobankers, industry, and patients – to boost biomedical research. To that end, we offer quality management services, support with ethical, legal and societal issues, and a number of online tools and software solutions. Ultimately, our goal is to make new treatments possible.

BBMRI-ERIC The European research infrastructure for biobanking and biomolecular resources in health and life sciences

CERTIFICATE

for the management system according to ISO 20387:2018

BBMRI-ERIC hereby confirms that, as a result of the internal audit, Biobank Väst, Sahlgrenska Universitetssjukhuset, 413 45 Göteborg

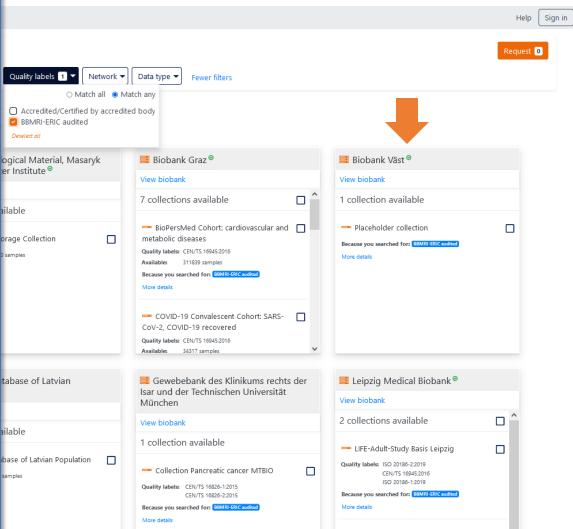


has established and operates a management system in accordance with the requirements of ISO 20387:2018.

Certificate ID: QMS/Quality Label/003 Date issued: 12 September 2022 Valid until: version change of ISO 20387:2018

Prof. Jens Habermann, M.D., Ph.D. Director General

Andrea Wutte, M.Sc. Head of Quality Management





ISO 20387 BBMRI-ERIC AUDITED / QUALITY LABELED BIOBANKS

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BBMRI-ERIC Quality Label:

PL: Port Biobank, Wroclaw

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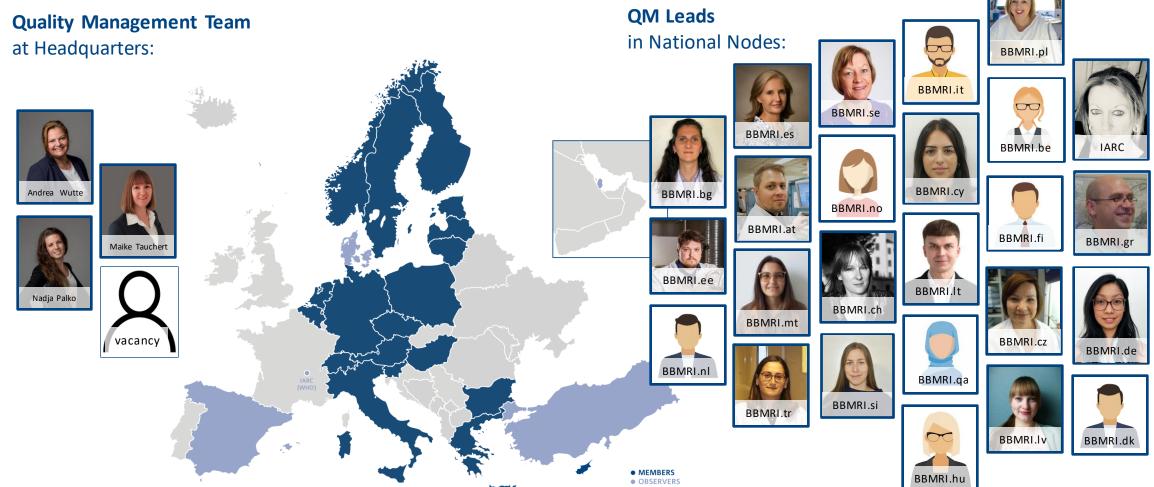
PL: Wroclaw Medical Univ. Biobank, accredited by PCA

CZ: Masaryk Memorial Cancer Institute Biobank, Brno, accredited by CAI

IT: Sezione Dipartimentale Biobanca, Azienda Ospedaliero Universitaria, Pisa, accredited by ACCREDIA



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> 210 QM representatives in the countries

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TWO SIDES OF THE SAME COIN

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Prof. Kurt Zatloukal National Node Director BBMRI.a Medical University of Graz

STANDARDISATION IS KEY

Page 10-15

Dr. Uwe Oelmüller
Vice President MDx Development

QUALITY ASPECTS IN ADOPT BBMRI-ERIC

Page 18-19

Prof. Marialuisa Lavitrano
National Node Director BBMRI.it



ご清聴ありがとうございました。 THANK YOU FOR YOUR ATTENTION



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