MIRRI
Microbial Resource Research Infrastructure

Generating standards for BRCs/CCs

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MIRRI

Microbial Resource Research Infrastructure

• MIRRI is an initiative within the European Strategy Forum on Research Infrastructure (ESFRI)

• Includes 16 public microbial culture collections and microbial resource centres, supported by 17 European and several non-European partners

www.mirri.org
MIRRI Objectives

• Building a Pan-European distributed research infrastructure
• Creating quality-driven, decentralized centre for resources and information
• Providing an unparalleled wealth of microbial resources, associated data, taxonomic methods and expertise to serve users' needs
• Establish a platform for capacity building, including training, master curriculum and consultation
• Ensure complementarity and avoid duplication of efforts
## Preparatory Phase Project

### Work Packages

| WP1 | MIRRI preparatory phase project management |
| WP2 | Design of the Microbial Resource Research distributed Infrastructure |
| WP3 | Define governance structure, legal status and operational practice |
| WP4 | Financial plan |
| WP5 | Communication, dissemination and outreach |
| WP6 | Development of services, outputs and foster interdisciplinary work programmes |
| WP7 | Capacity building, training and education |
| WP8 | Data resources management |
| WP9 | Legal operational framework for access |
| WP10 | Innovative Approaches |
WP 8.1
**Data acquisition**
- Define standards
- Deliver quality management
- Providing incentives

WP 8.2
**Data evaluation and curation**
- Evaluate data status
- Resolve contradictory information
- Improve ICT for data exchange

WP 8.3
**Data integration and interoperability**
- Survey and study of data management systems
- Compare and test systems

WP 8.4
**Data access**
- User survey on data retrieval
- Data security
- Attractive interface and intuitive navigation
The MIRRI-IS database distinguishes itself from other databases by four distinct criteria:

1. High **data quality** and intensive data curation,

2. **Interoperability** and data integration across BRCs/CCs

3. **Establishing complementarity** with ontologies used in other disciplines, applying appropriate data structure and **standards** interrogation of the information landscape at many levels

4. **Providing an open platform** for innovative downstream data analysis and product development.
Contextual data (metadata)

- land use
- nitrate
- salinity
- host relationship
- cell size
- motility
- calcium
- perturbation
- 16S
- sulfide
- bromide
- exoenzymes
- chemotaxis
- biofilm
- products
- antibiotics
- metabolism
- halophily
- magnesium
- substrate spectrum
- isolation
- oxygen
- pathogenicity
- light
- phosphate
- carbon
- classification
- genome
- organic matter
- pigmentation
- ammonium
- sulfate
- C/N ratio
- gram stain
- pH
- CO2
- cultivation
- temperature
Minimum Information about Biological Resources (MIaBRe) standard and checklist.

- Minimal Data Set (MDA) should include 1) Primary Strain Number, 2) Secondary Strain Number, 3) Name, 4) Organism Type, 5) Restrictions, 6) Status, 7) History of Deposit, 8) Growth conditions, 9) Form of supply, 10) Geographic Origin (and 11) accession number(s) to link the data to INSDC)

- Specific “packages” and additional subfields can be added to enrich the MDS.

- Follow the concept of MIxS standard
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