H3A consortium and H3ABioNet Standardization!

Dr. Judit Kumuthini | Prof. Alan Christoffels

H3A Biorepository WG| Standardized Reporting

Reporting

Documentation

Analytical study Plan

Analytical Report

MT Agreements

TOR

Workflow (Describes Processes)

SOPs, Policies

User Guides, White Paper etc

Data (Describes data structure, format and integrity of data)

Meta data/Ontologies/ Minimum Information Requirement Guidelines

Formats/Data compression algorithms/ Checksum ID

CIMR		Core Information for Metabolomics Reporting
GIATE		Guidelines for Information About Therapy Experiments
MIABE		Minimal Information About a Bioactive Entity
MIABiE		Minimum Information About a Biofilm Experiment
MIACA		Minimal Information About a Cellular Assay
MIAME		Minimum Information About a Microarray Experiment
MIAPA		Minimum Information About a Phylogenetic Analysis
MIAPAR		Minimum Information About a Protein Affinity Reagent
MIAPE		Minimum Information About a Proteomics Experiment
MIAPepAE		Minimum Information About a Peptide Array Experiment
MIARE		Minimum Information About a RNAi Experiment
MIASE		Minimum Information About a Simulation Experiment
MIASPPE		Minimum Information About Sample Preparation for a Phosphoproteomics Experiment
MIATA		Minimum Information About T Cell Assays
MICEE		Minimum Information about a Cardiac Electrophysiology Experiment
MIDE		Minimum Information required for a DMET Experiment
MIFlowCyt		Minimum Information for a Flow Cytometry Experiment
MIfMRI		Minimum Information about an fMRI Study
MIGen		Minimum Information about a Genotyping Experiment
MIIDI		Minimal Information standard for reporting an Infectious Disease Investigation
MIMIx		Minimum Information about a Molecular Interaction Experiment
MIMPP		Minimal Information for Mouse Phenotyping Procedures
MINEMO		Minimal Information for Neural ElectroMagnetic Ontologies
MINI		Minimum Information about a Neuroscience Investigation
MINIMESS		Minimal Metagenome Sequence Analysis Standard
MINSEQE		Minimum Information about a high-throughput SeQuencing Experiment
MIPFE		Minimal Information for Protein Functional Evaluation
MIQAS		Minimal Information for QTLs and Association Studies
MIQE		Minimum Information for Publication of Quantitative Real-Time PCR Experiments
MIRIAM		Minimal Information Required In the Annotation of biochemical Models
MISFISHIE		Minimum Information Specification For In Situ Hybridization and Immunohistochemistry Experiments
MIxS	**MIGS/MIMS**	Minimum Information about a Genomic/Metagenomic Sequence
	MIMARKS	Minimum Information about a MARKer gene Sequence
STRENDA		Standards for Reporting Enzymology Data

Projects and Biorepository data release

- Point of contacts for each projects

- Identify SOPs to be followed…..

- Help Desk for support: www.h3abionet.org

- Project level MIR for data reporting (MI foundry, ESBB, …)

Data Submission to H3ABionet

- How data should be submitted (SOP)

- What H3ABioNet will do (Due diligence- SOP)

- When will it be submitted (time line & project prioritization).

- Who can access the raw/meta/QC-ed and analyzed data

- Level of access to what level of information (Minimum information required for reporting genotype/phenotype and system biology information).

- Data transfer to and from H3ABioNet (hard discks, Aspera http://asperasoft.com???)

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Biobanks

a collection **of biological material** and the associated **data** and information stored in an **organized system** for a population or a large subset of a population

Biobank informatics

defining **structure, and standardization** of information that has been gathered from **multitude of sources** - population-based registries, biobanks, patient records etc.

Ontologies/Standards/Tools

- A way to talking about objects we are interested in in an explicit way and describing the relationships between these objects.

- Gene ontology – properties

- Sequence ontology – formalize the relationship between exons, introns, mRNA.

- Biobanks ??

Ontologies/Standards/Tools

Promoting coherent minimum reporting guidelines for biological and biomedical investigations: the MIBBI project

Chris F Taylor[*1,2], Dawn Field[2,3], Susanna-Assunta Sansone[1,2], Jan Aerts[4], Rolf Apweiler[1], Michael Ashburner[5], Catherine A Ball[6], Pierre-Alain Binz[7,8], Molly Bogue[9], Tim Booth[2], Alvis Brazma[1], Ryan R Brinkman[10], Adam Michael Clark[11], Eric W Deutsch[12], Oliver Fiehn[13], Jennifer Fostel[14], Peter Ghazal[15], Frank Gibson[16], Tanya Gray[2,3], Graeme Grimes[15], John M Hancock[17], Nigel W Hardy[18], Henning Hermjakob[1], Randall K Julian Jr[19], Matthew Kane[20], Carsten Kettner[21], Christopher Kinsinger[22], Eugene Kolker[23,24], Martin Kuiper[25], Nicolas Le Novère[1], Jim Leebens-Mack[26], Suzanna E Lewis[27], Phillip Lord[16], Ann-Marie Mallon[17], Nishanth Marthandan[28], Hiroshi Masuya[29], Ruth McNally[30], Alexander Mehrle[31], Norman Morrison[2,32], Sandra Orchard[1], John Quackenbush[33], James M Reecy[34], Donald G Robertson[35], Philippe Rocca-Serra[1,36], Henry Rodriguez[22], Heiko Rosenfelder[31], Javier Santoyo-Lopez[15], Richard H Scheuermann[28], Daniel Schober[1], Barry Smith[37], Jason Snape[38], Christian J Stoeckert Jr[39], Keith Tipton[40], Peter Sterk[1], Andreas Untergasser[41], Jo Vandesompele[42] & Stefan Wiemann[31]

The Minimum Information for Biological and Biomedical Investigations (MIBBI) project provides a resource for those exploring the range of extant minimum information checklists and fosters coordinated development of such

Ontologies / Standards / Tools

The management of information from experiments (both data and metadata) requires the adoption of reporting standards that ensure transparency and interoperability and that facilitate the integration and exchange of data from different sources. Reporting standards also facilitate the execution of more powerful queries against repositories of experimental data because core information will be regularized and extended information will be supplied in a well characterized manner. This long-term

Minimum information Projects

- If you want to register your checklist to MIBBI, please contact the BioSharing team
- Excel spreadsheet and XML document (schema) describing all registered projects

Bioscience projects registered with MIBBI

CIMR	**C**ore **I**nformation for **M**etabolomics **R**eporting
GIATE	**G**uidelines for **I**nformation **A**bout **T**herapy **E**xperiments
MIABE	**M**inimal **I**nformation **A**bout a **B**ioactive **E**ntity
MIABiE	**M**inimum **I**nformation **A**bout a **B**iofilm **E**xperiment
MIACA	**M**inimal **I**nformation **A**bout a **C**ellular **A**ssay
MIAME	**M**inimum **I**nformation **A**bout a **M**icroarray **E**xperiment
MIAPA	**M**inimum **I**nformation **A**bout a **P**hylogenetic **A**nalysis
MIAPAR	**M**inimum **I**nformation **A**bout a **P**rotein **A**ffinity **R**eagent
MIAPE	**M**inimum **I**nformation **A**bout a **P**roteomics **E**xperiment
MIAPepAE	**M**inimum **I**nformation **A**bout a **Pep**tide **A**rray **E**xperiment
MIARE	**M**inimum **I**nformation **A**bout a **R**NAi **E**xperiment
MIASE	**M**inimum **I**nformation **A**bout a **S**imulation **E**xperiment
MIfMRI	**M**inimum **I**nformation about an **fMRI** Study
MIGen	**M**inimum **I**nformation about a **Gen**otyping **E**xperiment
MIIDI	**M**inimal **I**nformation standard for reporting an **I**nfectious **D**isease **I**nvestigation

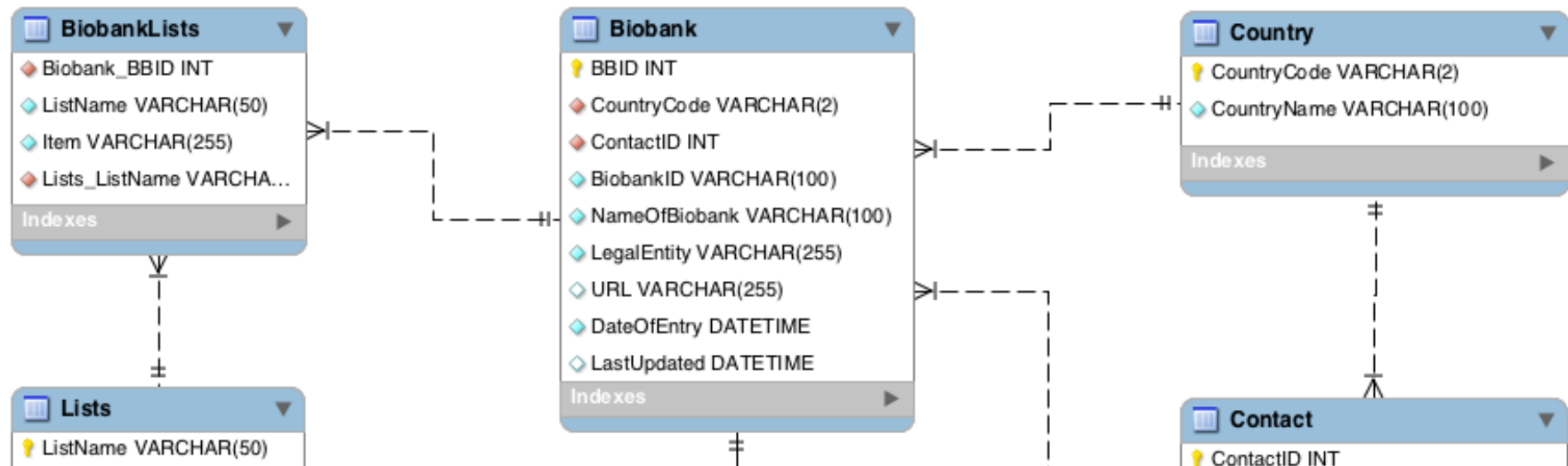# Ontologies/Standards/Tools

MIABIS

MIABIS: Minimum Information About Biobank data Sharing

MIABIS represents the minimum information required to enable the exchange of biological samples and data between biobanks.

- Data describing Biobanks
- Data describing Sample Collections/Studies
- MIABIS Attributes Description
- MIABIS ERD Explanation

MIABIS is used in the BBMRI.se Sample Collection Register bbmriregister.se.

The ERD diagram below is only a suggestion for how the MIABIS can be implemented in a relational database (this a reduced ERD):

Ontologies/Standards/Tools

- International cancer consortium, ESBB, MIBBI, OBIBA etc

EGA - data cycle (After QC and everything completed locally before submission)

- Your metadata, which will include details of your samples, experiments, runs/analysis, Data Access Committee (DAC), policy and dataset/s can be provided by two alternative means:

i)   Online using the EGA Webin tool

ii)   Creating and submitting XMLs