



A one-stop shop for minimal information standards

International communities of life scientists merge efforts to create an initiative for harmonising minimal information standards in biology

Hinxton and Oxford, 7 August 2008 – More than 20 grass-roots standardisation groups, led by scientists at the European Bioinformatics Institute (EMBL-EBI) and the Centre for Ecology & Hydrology (CEH), have combined forces to form the “Minimum Information about a Biomedical or Biological Investigation” (MIBBI) initiative (www.mibbi.org). Their aim is to harmonise standards for high-throughput biology, and their methodology is described in a Commentary article, published today in the journal *Nature Biotechnology*.

Data standards are increasingly vital to scientific progress, as groups from around the world look to share their data and mine it more effectively. But the proliferation of projects to build “Minimum Information” checklists that describe experimental procedures was beginning to create problems. “There was no way of even finding all the current checklist projects without days of googling,” says the EMBL-EBI’s Chris Taylor, who shares first authorship of the paper with Dawn Field (CEH) and Susanna-Assunta Sansone (EMBL-EBI). “As a result, much of the great work that’s going into developing community standards was being overlooked, and different communities were at risk of developing mutually incompatible standards. MIBBI will help to prevent them from reinventing the wheel.”

The MIBBI Portal already offers a one-stop shop for researchers, funders, journals and reviewers searching for a comprehensive list of minimum information checklists. The next step will be to build the MIBBI Foundry, which will bring together diverse communities to rationalise and streamline standardisation efforts. “Communities working together through MIBBI will produce

non-overlapping minimal information modules,” says CEH’s Dawn Field. “The idea is that each checklist will fit neatly into a jigsaw, with each community being able to take the pieces that are relevant to them.” Some, such as checklists describing the nature of a biological sample used for an experiment, will be relevant to many communities, whereas others, such as standards for describing a flow cytometry experiment, may be developed and used by a subset of communities.

“MIBBI represents the first new effort taking the Open Biomedical Ontologies (OBO) as its role model,” says Susanna-Assunta Sansone. “The MIBBI Portal operates in a manner analogous to OBO as an open information resource, while the MIBBI Foundry fosters collaborative development and integration of checklists into self-contained modules just like the OBO Foundry does for the ontologies”.

There is a growing understanding of the value of such minimal information standards among biologists and an increased willingness to work together across disciplinary boundaries. The benefits include making experimental data more reproducible and allowing more powerful analyses over diverse sets of data. New checklist communities are encouraged to register with MIBBI and consider joining the MIBBI Foundry." ●

Source Article

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About EMBL

The European Molecular Biology Laboratory is a basic research institute funded by public research monies from 20 member states (Austria, Belgium, Croatia, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Israel, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom) and associate member state Australia. Research at EMBL is conducted by approximately 80 independent groups covering the spectrum of molecular biology. The Laboratory has five units: the main Laboratory in Heidelberg, and Outstations in Hinxton (the European Bioinformatics Institute), Grenoble, Hamburg, and Monterotondo near Rome. The cornerstones of EMBL's mission are: to perform basic research in molecular biology; to train scientists, students and visitors at all levels; to offer vital services to scientists in the member states; to develop new instruments and methods in the life sciences and to actively engage in technology transfer activities. EMBL's International PhD Programme has a student body of about 180. The Laboratory also sponsors an active Science and Society program. More information on EMBL can be found at www.embl.org.

About EMBL-EBI

The European Bioinformatics Institute (EBI) is part of the European Molecular Biology Laboratory (EMBL) and is located on the Wellcome Trust Genome Campus in Hinxton near Cambridge (UK). The EBI grew out of EMBL's pioneering work in providing public biological databases to the research community. It hosts some of the world's most important collections of biological data, including DNA sequences (EMBL-Bank), protein sequences (UniProt), animal genomes (Ensembl), three-dimensional structures (the Macromolecular Structure Database), data from microarray experiments (ArrayExpress), protein-protein interactions (IntAct) and pathway information (Reactome). The EBI hosts several research groups and its scientists continually develop new tools for the biocomputing community. www.ebi.ac.uk

About the Centre for Ecology & Hydrology

The Centre for Ecology & Hydrology (CEH) is the UK's Centre of Excellence for research in the land and freshwater environmental sciences. CEH is a wholly owned research centre of the Natural Environment Research Council and employs around 500 staff at six major sites in England, Scotland and Wales with an overall budget of about £35m. CEH science covers three core areas of expertise: Biodiversity, Water and Biogeochemistry with a major cross-cutting activity focusing on Environmental Information. CEH tackles complex environmental challenges through integrated research, aiming to deliver practicable solutions to help preserve the environment for future generations. www.ceh.ac.uk

About the Natural Environment Research Council

The Natural Environment Research Council (NERC) funds world-class science, in universities and its own research centres, that increases knowledge and understanding of the natural world. It is tackling major environmental issues such as climate change, biodiversity and natural hazards. NERC receives around £400m a year from the UK Government's science budget, which is used to provide independent research and training in the environmental sciences. www.nerc.ac.uk

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