A one-stop shop for minimal information standards

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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: European Molecular Biology Laboratory