

The EMERALD ontology efforts

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Fundamental to the successful analysis and reproducibility of microarray experiments is the quality of the documentation and descriptions that are used to report microarray experiments. It is because of the value of standardised reporting that initiatives such as MIAME (Minimum Information About a Microarray Experiment) and MAGE-TAB (MicroArray Gene Expression Tabular) emerged and were rapidly adopted by the microarray community. Recently, a movement towards a more formalised representation of knowledge in the form of ontologies has become increasingly widespread within the biomedical community. The likes of the OBO (Open Biomedical Ontologies) Foundry have helped to enable those wishing to use formal knowledge representation techniques to model their data using ontology standards such as OBO and OWL (Web Ontology Language). Ontologies offer the advantages of shared understanding, reducing ambiguity, richer representations of data and a degree of machine readability, allowing computation to be performed over such models such as consistency checking. We discuss a move towards improving elements of the reporting of microarray experiments with the development of an ontology for Normalisation and Data Transformation. We also highlight the contribution from the OBI (Ontology for Biomedical Investigations) Consortium efforts and how this may impact the reporting of experiments within the microarray community..