Zebrafish Ontologies for Toxicological Screening

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The small size and rapid development of the zebrafish make it a useful vertebrate model for assessing potential effects of chemicals on development in a mid- to high throughput manner. Accordingly, zebrafish models are an attractive alternative to traditional in vivo mammalian reproductive and developmental toxicology test methods. However, there are several roadblocks to more widespread acceptance and use of zebrafish data. These include the lack of harmonization in the labelling and annotation of data collected by laboratories and limited ontological support for translating findings in the fish to the species of interest. Given the near-infinite chemical space and assay design permutations required to address specific research questions, ontologies provide an opportunity to increase data utility by helping to define relationships within the data. This presentation will describe the current use of ontologies in screening. We will review challenges and opportunities ontologies present for the assay developers and discuss ways to encourage their routine use. *This project was funded in whole or in part with Federal funds from the NIEHS, NIH under Contract No. HHSN273201500010C.*

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