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Development of a Curated Database of *In Vivo* Estrogenic Activity

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Abstract

Mandated testing to identify potential estrogen-active chemicals will involve thousands of chemicals, cost millions of dollars, and take decades to complete using current validated methods. High throughput screening (HTS) assays may streamline this process by quickly and cost-effectively identifying estrogen-active chemicals. Access to a comprehensive database of high-quality in vivo data is critical to effectively validate *in vitro* and *in silico* models and HTS assays, as well as enable more targeted *in vivo* testing. We created a reference database by searching the scientific literature and identifying *in vivo* studies with endpoints indicating estrogenic activity. Data from the studies were extracted and compiled using a standardized ontology. An R script was developed to evaluate the quality of the data in an efficient and standardized manner by modified Klimisch criteria. Data that were classified as reliable were added to the database, which will be publically available on the NTP website (http://ntp.niehs.nih.gov/go/40658). This project was funded in whole or in part with Federal funds from the NIEHS, NIH under Contracts No. N01-ES-35504 and HHSN27320140003C.