

## **The U.S. EPA's ToxCast Chemical Screening Program and Predictive Modeling of Toxicity**

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The ToxCast program was developed by the U.S. EPA's National Center for Computational Toxicology to provide cost-effective high-throughput screening for the potential toxicity of thousands of chemicals. Phase I screened 309 compounds in over 500 assays to evaluate concentration-dependent effects on diverse biological targets, and these data were used to build predictive models for developmental toxicity. Subsets of ToxCast chemicals with associated in vivo data were run in pilot in vitro and in silico studies using human embryonic stem cell, metabolomics, and computational modeling approaches identifying potential pathways of developmental toxicity.

*Abstract does not represent EPA policy.*