HExpoChem: a systems biology resource to explore human exposure to chemicals

Summary: Humans are exposed to diverse hazardous chemicals daily. Although an exposure to these chemicals is suspected to have adverse effects on human health, mechanistic insights into how they interact with the human body are still limited. Therefore, acquisition of curated data and development of computational biology approaches are needed to assess the health risks of chemical exposure. Here we present HExpoChem, a tool based on environmental chemicals and their bioactivities on human proteins with the objective of aiding the qualitative exploration of human exposure to chemicals. The chemical–protein interactions have been enriched with a quality-scored human protein–protein interaction network, a protein–protein association network and a chemical–chemical interaction network, thus allowing the study of environmental chemicals through formation of protein complexes and phenotypic outcomes enrichment. Availability: HExpoChem is available at http://www.cbs.dtu.dk/services/HExpoChem-1.0/. Contact: karine@cbs.dtu.dk Supplementary information: Supplementary data are available at Bioinformatics online.
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