Short Term Exposure Prioritization Needs for ToxCast™

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US EPA Community of Practice
Exposure Science for Screening and Prioritization

EPA Community of Practice
http://epa.gov/comptox/practice_community/

- Association of individuals interested in promoting utilization of advancements in computational toxicology to further Agency mission of protecting human health and the environment.
- Each CoP has a charter and an open membership policy and is co-chaired by a member of the National Center for Computational Toxicology.
- The Communities operate via activities such teleconferences, face to face meetings, team rooms, and workshops.
- By bringing together members from different parts of ORD, EPA and the outside scientific community, CoPs
  - promote the adoption of common practices and ontologies,
  - support development of common databases and software usage,
  - aid in construction of training materials,
  - provide recommendations on efficiencies of relevant operations
  - act as a public outreach mechanism for ORD activities.

- An important aspect of the communities is that they are very goal oriented in achieving objectives, and require that the members participate actively in the efforts. The existence of the communities provides the equivalent of "adjunct appointments" in the National Center for Computational Toxicology and helps the Center effectively engage with the outside parties and vice versa.

ToxCast™ Phase I

- May apply CEPA exposure categorization approaches to ToxCast™ 320
  - 55 of 320 Phase I chemicals have been evaluated under CEPA
- Access to databases with exposure information to add to ACToR
  - California pesticide use database
  - USDA pesticide residue database
  - Are there other databases that should be included (AHS,TRI, etc)?
- Proof-of-principle for incorporating exposure information to prioritize
  - Consider big databases with exposure information on Phase 1 chemicals
  - How could this information be used in concert with the ToxCast™ in vitro data to develop weighted scheme for prioritization?

ToxCast™ Phase II

- Nominations for Phase II
  - Currently based on availability of toxicity data, use, and volume (limited exposure scenarios)
  - 5000 chemicals are in queue and are in subsets based on physical-chemical properties that determine viability of testing in ToxCast assays
  - 2000 of these chemicals will be procured by end of fiscal year
  - 1200 will be selected for limited assays (approx Jan 1)
  - 300 will be selected for full set of assays (approx Jan 1)