

US EPA ARCHIVE DOCUMENT

## 21<sup>st</sup> Century Toxicology Workgroup Project Proposal to PPDC

**Project Name:** Pesticide Priority List Subgroup (PPLS)

Members: Jimmy Roberts, Matt Keifer, Caroline Cox, Erik Janus, Virginia Ruiz, Valentin Sanchez

**Goal:** Develop a priority list of candidate pesticides for exploring the process of developing human health pesticide biomarkers for research and clinical applications

### Key Activities/Milestones:

- Expand the workgroup to include proper expertise
  - Identify other key personnel (in addition to those already identified below) needed to obtain adequate input on possible pesticide choices
  - Identify other key information resources in addition to those listed below
  - Conference calls to identify roles and responsibilities of workgroup members
- Discuss human poisoning scenarios, both acute and chronic
- Develop a set of criteria for selecting priority pesticides
- Review evidence of acute and chronic poisoning/exposure from the information resources listed below
- Revise and expand the pesticide priority list
- Timeframe: 6 months-1 year

### Information Resources:

- Medical literature review
- Review of pesticide incident reporting data
- Review of pesticide usage data
- Review of 6(a)2 reports
- ...

### Key Expertise & Partners Needed to Accomplish Objectives:

- NIOSH (input from Geoff Calvert is necessary)
- Environmental/Occupational Epidemiologist (Matthew Keifer, Michael Alavana NCI)
- Human pesticide toxicologist
- Emergency Department physician (Dan Sudaken at Oregon State, others)
- Primary Care physicians familiar with pesticide poisoning (James Roberts, also someone from Migrant Clinicians network)
- Medical Toxicologist familiar with Poison Control Center (PCC) data
- EPA/OPP expertise in usage (Biological Economical Analysis Division), toxicology (Health Effects Divisions), registration (Registration Division)
- State specific use information (California)
- State pesticide incident surveillance system (or experts in pesticide incident programs at the state level). <http://www.cdc.gov/niosh/topics/pesticides/statebase.html>
- ...

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### Considerations, Issues, etc:

- Number or frequency of human pesticide exposure reports are as equally important as severity of poisoning (i.e. some pesticides have very high acute toxicity and are important to identify, but others that are commonly encountered but with lower acute toxicity are still important from a “diagnosis” point of view—as well as a “ruling out the diagnosis” point of view); therefore, acute and chronic poisoning scenarios should be considered.
- Would be helpful to have access to data that were submitted to EPA or international agencies for registration
- Review of information resources will likely result in overlap between this subgroup and the Data & Information Subgroup.

### Example of a Draft List of Pesticides (This is **EXTREMELY** preliminary, and meant to get the conversation started). Input from PPDC would be appreciated.

- Organophosphates/Carbamates (while we have cholinesterase testing, the point here is to develop “rapid/diagnostic testing” and currently cholinergic testing is a sendout in most hospital laboratories).
- Pyrethroids—particularly the type II group
- Neonicotinoid insecticides
- Fipronil
- ...