

**May 25, 2007**

**Workshoppers,**

This is an update on the plans for the workshop on dose-response uncertainty being hosted by Resources for the Future in Washington DC, 22-23 October.

A. Objective

Demonstrate methods for quantifying uncertainty in the dose-response relationship, focusing on environmentally relevant levels.

***Emphasize, the point is quantification of uncertainty for use in integrated uncertainty analysis.***

B. Product

Book of method demonstration papers and critiques, published by RFF, to serve as a technical resource with the goal of advancing the state of the art for dose-response uncertainty quantification.

C. Process and timeline

*Pre-workshop Phase I: by September 28*

As many as would like are invited to ply their craft on a couple standard datasets and document this demonstration in a technical paper, which should:

1. Explain the method
2. Analyze at least one of the data sets (*see D below*)
3. Highlight method strengths and limitations

*Pre-workshop Phase II: by October 17*

To organize the discussion and subsequent publication, remaining participants will be asked to comment on these papers from the following perspectives:

1. Toxicologist / epidemiologist
2. Mathematician / statistician
3. Risk analyst / manager / policy maker / user

Asking for comments from these viewpoints is NOT meant to put people in strait jackets, please feel free to wander off this reservation ... it's simply to provide an organizing principle. (But of course, the real principle is the self-organizing property of chaos.)

*At workshop: October 22-23*

1. Discuss methods and critiques,
2. Determine baseline state of the art

*Post-workshop: by November 20*

1. Participants provide refined demonstration papers/critiques, if desired
2. RFF organizes publication (*targeting end of January for completion*)

D. Data sets

Modelers are asked to use at least one of the following data sets to demonstrate their selected method(s):

1. Example data set for the BMD software – available via [http://www.epa.gov/ncea/bmds\\_training/toc.htm](http://www.epa.gov/ncea/bmds_training/toc.htm)
2. Formaldehyde – we plan to provide draft reports that include key data (targeting mid-June)
3. Naphthalene – as for formaldehyde

(Note: this workshop does not aim to evaluate the quality of existing toxicity data; rather, it seeks to test different methods using common data sets, to anchor the evaluation of similarities/differences of various approaches for addressing dose-response uncertainty.)

#### E. Method demonstration papers

Commitments to date:

1. Probabilistic inversion (Cooke-MacDonell)
  2. Method name? (T. Cox)
  3. Non-parametric Bayesian bioassay evaluation method (*maybe/tentatively, still being coded, GWU*)
  4. Bayes model averaging – *could someone volunteer to apply this method?*
  5. Standard MLE method (see BMD software) – *Jeff Swartout (?)*
- (Alternately, the individual papers could include BMD runs as comparative context.)

Your suggestions are most welcome.

#### F. Sponsors

To date: RFF (\$20K) and EPA (\$15K). Hopefully another contributor will also be able to support this workshop. Given the limited budget, we would appreciate if your organization/related programs could support this effort by covering your individual travel costs.

#### G. Participants

Current set of planned participants:

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Hope to see you all in DC in October

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